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Canada. Royal commission on
employment of firemen on
diesel locomotives in freight
and yard services on the
Canadian Pacific railway

Proceedings

1957 no 22-24



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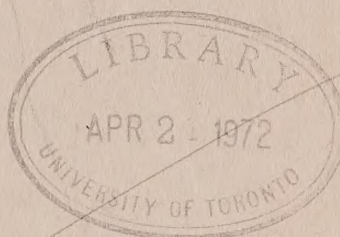
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ROYAL COMMISSION ON EMPLOYMENT OF FIREMEN
ON DIESEL LOCOMOTIVES IN FREIGHT AND YARD
SERVICE ON THE CANADIAN PACIFIC RAILWAY

13 22-24

PROCEEDINGS



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Chairman

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ROYAL COMMISSION ON EMPLOYMENT OF
FIREMEN ON DIESEL LOCOMOTIVES IN
FREIGHT AND YARD SERVICE ON THE
CANADIAN PACIFIC RAILWAY

Proceedings of Public
Hearing held at Ottawa,
Ontario, Thursday, April 4,
1957

PRESENT:

Hon. R. L. Kellock	Chairman
Hon. C. C. McLaurin	Member
Hon. Jean Martineau	Member
Douglas M. Fraser	Secretary
A. R. Winship	Asst. Secretary

APPEARANCES:

D. W. Mundell, Q.C. C. J. A. Hughes, Q.C.	Representing the Commission
I. D. Sinclair, Allan Findlay,	Representing the Canadian Pacific Railway Company
David Lewis,	Representing the Brotherhood of Locomotive Firemen and Enginemen

- - - -

Thursday,
April 4, 1957.

22nd DAY

MORNING SESSION

--- The Commission resumed at 10.30 a.m.

- - - -

GEORGE RUSSELL, recalled

THE CHAIRMAN: Mr. Lewis mentioned yesterday the possibility of the Commission making some inspections, and I think he had in mind certain places in the west. On the subject of sittings outside of Ottawa, as you know counsel have made suggestions to us from time to time as to where these sittings should be held, and the Canadian Labour Congress have also made some suggestions, which included Saint John. We now understand from counsel that as far as they are concerned they do not desire that we should hold a sitting in Saint John, but if a sitting should be held there some public announcement would have to be made reasonably soon.

We think that with respect to Saint John there should be a public announcement there that the Commission will sit there if there are any persons or organizations that desire to make representations to us. We will therefore advertise a sitting at Saint John and request that if any person or organization desires to make representations to the Commission they should notify the Secretary in writing on or before a date to be named. In the event that there are no responses to that announcement we will not sit in Saint John; otherwise we will.

When the Commission first met with counsel on January 28 last, when all counsel were present -- Mr. Lewis and Mr. Gamble were there -- it was then intimated to us that the union -- I am not sure about the railway -- desired that the Commission should make certain inspections of places and operations, and that we should ride on diesel locomotives over the road, and I think the Mountain Territory was mentioned particularly. It was then arranged that before making any such inspections, the Commission Secretary would apply to Mr. Sinclair, representing the railway company, to make the necessary arrangements, and that then Mr. Sinclair would notify Mr. Lewis about the arrangements that had been made. We have carried out certain inspections under that arrangement.

As far as Montreal is concerned, we have seen we think all the places and operations that have been mentioned in the evidence. However, in order that nothing should be overlooked we would appreciate if counsel would put on the record, either now or at some other convenient time, the particulars of the places and operations which their clients desire us to see. Then we would not come to the end of the day and find that something had been overlooked. I do not

know whether you are in position to do that this morning, Mr. Lewis.

MR. LEWIS: It has been done.

THE CHAIRMAN: Is that on the record?

MR. LEWIS: Not on the record. I have not the letter with me, but by arrangement among counsel and with the secretary of the Commission, and following the suggestion of the Commission, I wrote to the Secretary of the Commission yesterday morning a letter setting out my suggestions for sittings, which were Toronto, Winnipeg, Calgary and Vancouver, and also setting out the yards and operations on the road which the union would like the Commission to observe.

THE CHAIRMAN: That is first rate.

MR. LEWIS: A copy of that letter has gone to Mr. Sinclair, and he informs me that he has given it to the Canadian Pacific Transportation official and he has made some suggestions regarding the times at these places. So the matter is in motion. If it is desired that that letter be placed on the record I can bring a copy this afternoon.

THE CHAIRMAN: Not necessarily, as long as we have it in some written form so that nothing will be overlooked.

MR. SINCLAIR: It is in the hands of the Secretary and in the hands of the railway.

THE CHAIRMAN: It may be that as the evidence progresses or as we review the evidence the Commission itself may desire to see certain places or operations. We would prefer in future that in connection with all inspections counsel should accompany us, or if that is not practical that representatives of each party should accompany us on all inspections. We cannot insist on that but we think it would be better so as to avoid any misunderstanding in the future.

I did not know about that letter. That letter will be quite sufficient, Mr. Lewis, as far as Montreal is concerned. I suppose your letter covers Montreal, does it?

MR. LEWIS: No sir.

THE CHAIRMAN: Would you put the details as to Montreal on the record, that is the particular places and operations you want us to see so that we may be sure we have seen them. We would then probably have something to do at the Easter break.

Then, not having seen your letter, may I ask if your letter simply mentions the yards or does it mention particular places and operations in the yards?

MR. LEWIS: No, it just mentions

the yard, and not any particular operations.

THE CHAIRMAN: Would you do the same thing in connection with the other places and state specifically what you wish us to see. You can either write another letter or put it on the record. Indicate the particular places and operations so that we will not be coming back from Vancouver and after arriving in Ottawa find that we have missed something.

MR. LEWIS: If I may have some days in which to do that? I will try to do it before the Easter adjournment. I will have to make certain inquiries in distant places.

MR. SINCLAIR: I should like to file, with your permission, as Exhibit 123, fifteen trip reports made by Mr. Russell. These are numbered. Some of them run into the second page and where that takes place they would be numbered, for example, 3 and 3-A.

EXHIBIT NO. 123 -- Details of trip records.

BY MR. SINCLAIR:

Q You have a copy of Exhibit 123?

A Yes, I have.

Q Looking at Exhibit 123, Mr. Russell, the first sheet shows that it was a third class freight train and the locomotive was made up of two road switcher units. The trip was from Medicine Hat to Alyth,

1. The first part of the paper discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business or organization. The author argues that without reliable records, it is impossible to make informed decisions or to identify areas for improvement.

2. The second part of the paper focuses on the challenges of record-keeping in a digital age. While technology offers many advantages, it also introduces new risks, such as data loss and security breaches. The author suggests that organizations should implement robust backup and security protocols to mitigate these risks.

3. The third part of the paper explores the role of record-keeping in legal and regulatory compliance. It notes that many industries are subject to strict regulations that require the maintenance of detailed records. Failure to comply with these requirements can result in significant fines and legal consequences.

4. The fourth part of the paper discusses the importance of record-keeping in financial management. It explains that accurate records are necessary for preparing financial statements, budgeting, and forecasting. The author also highlights the role of records in identifying trends and opportunities for growth.

5. The fifth part of the paper concludes by summarizing the key points discussed and reiterating the importance of record-keeping. It encourages organizations to adopt a proactive approach to record management and to regularly review and update their record-keeping practices.

a distance of 178 miles. Where did you ride on this trip?

A I rode in the leading unit cab.

Q For the entire trip?

A For the entire trip, yes.

Q Then under "Details of Duties Performed by Firemen enroute" you record:

"Between miles 12 and 14 the fireman was out of cab and opened one panel of each unit apparently checking cooling water".

Would you read that, as my copy is a little dim.

A (Reads)

"Between miles 12 and 14 fireman was out of cab and opened one panel of each unit, apparently checking cooling water. Train was inspected at Brooks and fireman got down to drain air reservoirs. Train inspected at Gleichen, air reservoirs again drained by fireman."

He got down and drained the reservoirs.

Q Then under "Final Inspection duties Performed by Firemen" you state:

"None. Waited to get his trip ticket from engineer, then picked up his gear and left."



Then "Comments on Preparation of Form MP-74"
you state:

"The engineer picked up the MP-74's
forms both units and delivered
them to the shop. Also completed
MP-74's in shop. The engineman
inspected the units on the shop
track and ^{made}~~make~~ the comment to me
that they were okay."

A Yes.

Q Then under "Additional comments" you say:

"The engineer made four running
inspections from his side. All
signals affecting the train
movement were called and repeated;
three signals were called and
repeated while fireman was out
of cab. Fireman looked back over
the train through the rear window
on his side. Trainman opened the
window to inspect on the left
side and looked through rear
window on the right side."

Any further comments you wish to make on
that trip record?

A No. When I say he looked at the cooling
water, he went to that panel and I presume
that is what he was doing. I was not
with him actually, but I saw him out there
doing that. There was no comment made on it.

Q By the way, during that first trip where was the head-end fireman riding on the left-hand side, and where was the fireman?

A The head trainman was riding in the front seat and the fireman was riding in the rear seat, on the left side.

Q That is the trip referred to on page 1?

A Yes.

Q On page 2, this is a Trainmaster No. 8919. Where was the fireman and trainman riding there?

A The trainman was riding in the front seat and the fireman was in the rear seat.

Q For the entire trip?

A As far as I went with them.

Q You went 75 miles, I notice?

A To Bassano.

Q For the 75 miles were you in the cab of the engine?

A Yes.

Q All the time?

A Yes.

Q. Under the heading "Details of duties performed by firemen en route:

At Gleichen where inspection made fireman left cab and went to the station office, picked up orders and returned to the cab. At Bassano three cars were lifted and fireman was out of cab throwing switches for movement over cross-over etcetera. This was done to expedite movement over the road."

A. Yes.

Q. Where was the trainman?

A. The trainman was on the ground, also throwing switches.

Q. Where was the conductor and the rear trainman?

A. The rear trainman was walking up while they were doing that.

Q. And the conductor?

A. The conductor was walking up also. They wanted to get out of there - they didn't have a lot of time.

Q. Under "Additional Comments:

Engineer made three running inspections out of the rear window (about 20 seconds). Fireman made two running inspections from

"the rear window, about 30 seconds."

How were you taking these times when you were making these observations?

A. Out of curiosity I used a stop watch on some of them, and on others I counted.

Q. "Trainman called engineer's attention when he appeared to overlook sounding whistle for crossing. Trainman also called attention of engineer to stop clear of Stratmore Sub Junction switch as required by train order. All signals were called and acknowledged by the crew."

From your experience Mr. Russell, when you say that the trainman called the engineer's attention to sounding whistle for crossing, is that the usual thing or is that unusual?

A. Generally the engineman is whistling for the crossing. But I recollect this: this trainman had been disciplined for failure to whistle for a crossing, and he commented at the time.

Q. The trainman had been disciplined for what?

A. For failure to whistle for a crossing.

Q. How can the trainman whistle?

A. His part of the responsibility.

Q. Failure to do what?

A. To bring it to the engineman's attention.

Q. On another occasion?

A. On another occasion. He was pretty sharp this day.

Q. I turn now to sheet 3: Here we have two road units, road switcher units 8543 and 8508, third class freight train. Where were the head trainman and fireman seated on this trip, Mr. Russell?

A. I had one trip where the fireman sat ahead of the trainman - I am not sure if this was it.

MR. LEWIS: It was a later one.

THE WITNESS: It was on one of these subs.

BY MR. SINCLAIR:

Q. Have you noted it in your notes?

A. Yes.

Q. We will come to that if this is the trip. Yes, I notice on your 3a you have that noted. Under "Additional Comments" you say:

"On this trip the fireman occupied the front seat ahead of the trainman."

A. Yes.

Q. We will not take too much on these, but in your observations on these 15 trips were there other occasions when the fireman sat ahead of the trainman on the left-hand side?

A. No, there were not. I thought this was unusual; actually, this is the first time I have seen a fireman seated in the front seat.

Q. On a diesel?

A. On a diesel.

Q. You mean not only on these observations, but in your observations generally?

A. Generally, yes.

Q. Under "Details of duties performed by fireman en route" on page 3 of Exhibit 123 you say:

"This was a run-thru engine. Inward crew left engine on arrival almost immediately and outward crew moved the train forward a short distance and cut engine off to begin switching. Fireman stayed in cab until engine back on train then got out to drain reservoirs and walk around engine. Checked cooling water and drained reservoirs when stopped at Denhart for meet and train inspection."

A. Correct.

Q. Under "Additional Comments" you say:

"Trainman set out one car by himself and fireman relayed signals to stop this car. Signals could have been given to engineer without difficulty, as area where car spotted wide open. A second car was spotted up in another spur at the same time and rear crew members were present. Signals were given to the engineer on this occasion, which was a similar set up for spotting a car."

Similar to what, similar to what you are describing above?

A. Yes; I might explain, the spurs were on the engineman's side, one ahead of the other, two separate spurs.

Q. "Engineer discussed with conductor where they would likely go for train 951. The engineer made one running inspection and the fireman none on this trip. Signals were called and acknowledged. On this trip the fireman occupied the front seat ahead of the trainman. There

"was no obvious reason for this and no comment from the crew. During switching operations at Bassano fireman sat in his seat. All signals for movements were given to the engineer."

A. Yes.

Q. Page 4, Exhibit 123: Again two road switcher units. Where did you ride on this trip?

A. In the cab of the lead unit generally, but I was back in the trailing unit for a little while.

Q. How long?

A. I did not keep track of it exactly.

Q. About how far?

A. About 10 miles possibly. We had a meet, and I was back there before we got to it.

Q. And were you keeping the crew under observations when you were in the second unit?

A. Yes.

Q. You say on this trip you were on the lead cab except for approximately 10 miles?

A. Yes.

Q. Under "Details of duties performed by fireman en route" you say:

"When train stopped for inspection and meet at Lancer fireman checked cooling water and steam generator, also blew down reservoirs. During switching operations fireman sat in his seat. No signals were taken by him. Volunteered information to engineer as to location of car to be picked up."

What was the engineer doing when the fireman was checking cooling water and steam generator?

- A. He was on the ground part of the time, and the other part of his time he was in the cab.
- Q. Just sitting there?
- A. No, he was pumping up his train, and brake testing.
- Q. Here, Mr. Russell, I notice you refer to a steam generator. This is a freight movement?
- A. Yes.
- Q. It is a third-class freight train, in a freight movement. Was there a steam generator on these units?
- A. The trailing unit had a steam generator on it, on stand-by.
- Q. When did the fireman go and look at that?

A. He went and looked at that while we were standing, before we left.

Q. The steam generator was not putting steam into the train anywhere?

A. No.

Q. It was just on stand-by?

A. Stand-by, yes.

MR. LEWIS: The witness said while they were standing, before they left. Would that be at Lancer?

THE WITNESS: I believe he did. I thought it was before we left Empress... are we beyond that ...?

MR. SINCLAIR: Lancer wasn't on this trip, I do not believe. Yes, you are quite right.

MR. LEWIS: I think the writing suggests it was done at Lancer.

BY MR. SINCLAIR:

Q. Where was it done?

A. Both at Empress and at Lancer.

BY THE CHAIRMAN:

Q. What do you mean by "check steam generator"?

A. He did not do any physical thing with it.

That generator has a switch that places certain ~~certain~~ circuits in position for the work it is going to do, and he would look and see that that switch was in the

stand-by position.

BY MR. SINCLAIR:

Q. Does it sometimes move by itself?

A. No; it might have been left off.

BY THE CHAIRMAN:

Q. Why would he check it twice, at Empress and at Lancer?

A. Actually I don't know why he did make the second check of it. There were no alarm bells or anything to indicate that it was not functioning properly.

Q. When you speak of the steam generator being on stand-by, what do you mean?

A. The generator is not in use to generate steam for heating purposes. It is set up to circulate the water in it to keep it from freezing.

BY MR. SINCLAIR:

Q. Under "Additional Comments" you say:

"All signals were called and acknowledged throughout the trip. The engineer made three running inspections and the fireman two. The inspections were made through the rear window of the cab."

A. Yes.

Q. I turn now to sheet 5: Again this is

a Trainmaster. Do the comments as to seating arrangements on these road switchers apply here too, that the trainman was seated ahead of the fireman?

A. Yes, it would.

Q. The trainman was ahead of the fireman?

A. The trainman was ahead of the fireman.

Q. Over the entire trip?

A. Over the entire trip.

Q. Were you in the cab of the unit over the entire trip?

A. I was, yes.

THE CHAIRMAN: There was only one.

MR. SINCLAIR: Yes, Mr. Chairman; I was wondering if he had gone out of it.

BY MR. SINCLAIR:

Q. Under the heading "Details of duties performed by fireman en route" you say:

"At Webb train standing for meet and inspection, fireman checked cooling water. At Maple Creek while train stopped fireman checked cooling water and drained air reservoirs. Fireman sat on his seat during switching operations at Gull Lake, Maple Creek, Irvine and Dunmore. All signals were given to the engineer for this work."

Under "Additional Comments" you say:

"During this trip the fireman made running inspections through the rear window of cab on the left side. The engineer made 8 running inspections out the open window on his side and observed a not box on one occasion. Before leaving the shop track at Swift Current the engineer wanted some information on part of the apparatus on the engine. The ~~fireman~~^{foreman} came out and explained to him."

I now turn to sheet 6.

BY THE CHAIRMAN:

- Q. Is a road switcher ever used to haul passenger trains?
- A. Yes sir, they are used to haul passenger trains.
- Q. That is why you find a steam generator on some of them?
- A. On some of them, yes.

BY MR. SINCLAIR:

- Q. Sheet 6 of Exhibit 123: This is another Trainmaster unit. As to the seating arrangement, I will not ask you the question again --

if your comments do not deal with them --
is it correct that the trainman would
be seated ahead of the fireman in each
case?

A. That is correct.

Q. That is Trainmasters or road switchers?

A. That is Trainmaster or road switchers.

Q. All other types, that is GM or Alco?

A. Yes.

Q. Under the heading "Alarms and defects
en route and actions of crew" you say:

"Hot engine alarm at Bennett
mile 39.9 Strathmore sub. Engineer
reduced throttle to allow engine to
cool off. Fireman went out on
running board and checked cooling
water."

Where were you riding on this cab?

A. I was in the cab.

Q. Throughout the entire trip?

A. Yes sir.

Q. Did the engineer ask the fireman to go
out?

A. No, he did not. Actually he was
apparently not concerned; when the
alarm went he eased off the throttle.
As a matter of fact, we had just
come to the top of a hill at Bennett,

and we were going to start downhill
and he did not seem to be concerned
about it at all.

Q. "He" being the engineer?

A. Yes.

BY THE CHAIRMAN:

Q. What is involved in checking the cooling
water?

A. There is a glass gauge where you can see
the amount of water.

Q. Where is the gauge located?

A. Out in the head of the unit.

Q. Inside one of the doors?

A. Inside one of the doors, yes.

Q. That shows the level of the water?

A. The level of the water in the cooling
system, yes.

BY MR. SINCLAIR:

Q. Would anything have to be re-set on
the unit, or would it not?

A. No. It cooled off itself, and by the
time the fireman came back in the cab
the temperature had dropped below the
setting of the alarm, and it did not
neat up again.

Q. Now looking under "Additional Comments"
you say:

"On this trip the engineer made 12 running inspections through the rear window. The fireman made 11 running inspections through the rear window on the left side. All signals were called and acknowledged en route. Signals were given to the engineer when moving the engine at Medicine Hat and Alyth. Fireman advised engineer yard track to be entered at Alyth was all clear."

Why would he do that, Mr. Russell?

- A. I suppose he thought it might help; however, the trainman was on the ground and had lined the route, and was ahead of the engine giving the proceed signal to the engineer.

--

--

--

Q You say:

"Trainman was ahead of the engine giving signals to engineer to enter the yard track at Alyth. The head end trainman checked the speed of the train at miles 7, 18 and 38 with his watch and compared with the speedometer conferring with the engineer as to the accuracy of the speedometer. Fireman sat on his seat throughout the trip when in motion except when alarm went for the hot engine."

In your experience, Mr. Russell, on these road trips, is it or is it not usual to head an engine into a track that is not cleared by the trainman? Would he take a train into --

A Oh, it would be unusual, very unusual.

Q This is at the terminal?

A At the terminal, yes.

Q And he was going to yard his train?

A That is correct.

Q No. 7, and here again we have two road switcher units. Where did you ride on this trip?

A In the cab for the entire trip.

Q Taking "Alarms and Defects" you say:

"One alarm mile 157 ground relay tripped. Engineer asked fireman to push reset button. Engine did not again load, fireman checked fuses, found them okay. Engine started to load on its own accord."

I think you have some comment on this?

A The alarm went and I am not positive whether he had it just in the first throttle or shut off altogether. We were drifting down a grade.

Q Yes?

A And he went to work it again and the alarm went and the engineer had an indication it was a ground relay and asked the fireman to push the reset button.

Q Where is that located on this type of unit?

A Right behind the engineer. Actually he could have stood up and pushed it himself. However, he did ask the fireman to reset it, but the engine did not load after it had been reset and the fireman took all the fuses and checked them.

BY HON. MR. McLAURIN:

Q What do you mean by "did not load"?

A It did not produce power to the traction motors on this one unit. He checked all the fuses and put them back. There was nothing wrong with them.

BY THE CHAIRMAN:

Q Where are they located?

A This particular engine, sir, just beside the fireman's seat in a panel at the back of the cab on the left side.

BY MR. SINCLAIR:

Q And while you did not have power on this engine were you running along?

A Oh yes.

Q If that unit had stopped on this train, Mr. Russell, and had produced no power at all could the one unit or could it not have taken this train into the clear at a station?

A Yes, we could have carried on.

Q You could have carried on right to the next station?

A Well, we could have gone to Bassano.

Q You could have gone all the way?

A Yes.

Q You had surplus power from wherever this mileage was or did you have surplus power over the entire move -- 2500 tons --

A There is surplus power. That is not near the tonnage of the unit.

Q Now, I notice under "Details of Duties performed by fireman enroute" you say:

"Between Alyth and Ogden
fireman" --

That is just after leaving on your trip?

A Yes.

Q --"fireman left cab and opened panel
door on first unit."

Why did he do that?

A He did not make any comment. There was nothing said about it and from the panel he opened I presumed he looked at the water.

Q And did the engineer ask him to do it?

A No, there was nothing said.

Q Did he report to the engineer when he came back?

A No sir, he did not make a report.

Q "At Carsland stop made for inspection
and fireman checked cooling
water, drained reservoirs."

Then we come to the trip record of your eighth detailed observation, Mr. Russell. Here we have two road switcher units, a third-class freight train, and the tonnage is 2222. Where did you ride here?

A Medicine Hat --

Q Where did you ride?

A I was in the cab of that engine.

Q Of the leading unit?

A On the leading unit.

Q Over the entire trip?

A I believe I did not keep track --

Q My note that you gave me on this one is that you rode the second unit for about a quarter of the trip, keeping the engine crew under observation. Is that note that I have wrong?

A That would be about what I -- very close to it.

Q Under "Details of duties" you say:

"Between miles 1 and 2 fireman was in cab of trailing unit, also between miles 76 and 80. At Brooks when stopped for inspection fireman checked cooling water and drained reservoirs. At Cluny stop for inspection again, drained reservoirs and checked water. After inspection it was necessary to move ten cars into the elevator track and fireman was on his seat looking back and took signals for part of the movement."

Then you have some comment. Before I ask you for your further comment, what



was the engineer doing when the fireman was making these checks of the cooling water and draining reservoirs and when you were stopped for inspection?

A He was down on the ground part of the time, walked around the engine, and part of the time he was in the cab.

Q Doing what?

A Sitting in the cab.

Q Working?

A No, they were stopped.

Q Under "Additional Comments" you say:

"During this trip the fireman made 15 running inspections including one from the engineer's side. He spent a good deal of his time standing in the cab on the left side and a portion of the time beside the engineer on the right side. The engineer made 8 running inspections from his side. All signals were called and acknowledged. On inspection at Cluny a brake beam down was discovered and ten cars were uncoupled from the train to move through the elevator track with elevators

"on the engineer's side.

This move made to place these cars near the caboose for equipment required."

THE CHAIRMAN: It does not say "to place these cars". It says "to place the car".

MR. SINCLAIR: I am sorry.

MR. LEWIS: That is the one with the defect.

BY MR. SINCLAIR:

Q "-- to place the car near the caboose for equipment required. The head end trainman was on the steps of the trailing unit on the engineer's side and signals given to the engineer when the movement started. Going back into the track both men, R.E. trainman" --

That is "rear end trainman"?

A Yes.

Q "-- and conductor got on top of the point car, the head end trainman staying on the right side of the trailing unit. When the engines got to the turnout the head end trainman moved over to

"the left side and relayed signals to the fireman for completion of this movement. On completion of repairs to the car which was made by all three men between the elevator and car, the conductor returned to the caboose and signals were given to the engineer for movement out of the elevator track and back on to the train. The head end trainman was on the engine for completion of the movement, signals being given by the rear end trainman to couple up the train."

Now, what is your comment there with regard to the use of the fireman as a signal passer on part of that move. In your opinion was that or was it not necessary?

A No, it was not necessary. It could have been done without giving him signals.

Q As I understand your explanation, on the reverse movement --

A Well, I was down there --

THE CHAIRMAN: Do not speak at the same time. Listen to the question and then answer.

BY MR. SINCLAIR:

Q As I understand, on the reverse movement you made the observation of the signals going directly the engineer?

A Yes, we were on the ground, the crew. I was down there with them making this repair and the conductor went on over to the caboose with the tools he had and so on, and when we were through with it they just gave that signal to go ahead right there.

Q Was that between the elevator and the train?

A And the car, yes.

Q And they were sending them up to the engineer between the elevator and the --

A And the car, yes.

Q The next trip is a Trainmaster and under "Details of Duties performed by Firemen en/route" you have:

"At Carsland and Brooks fireman checked cooling water and drained reservoirs. At Brooks one switch made to lift one car, fireman sat on seat during switch movements, generally looking in direction of movement. Signals for these movements were all given to the engineer."

Then, under "Additional Comments" you have:

"All signals were called and acknowledged. Engineer made nine running inspections from his side from his open side window. Eight running inspections were made by the fireman on the left side through the rear window. Leaving the shop track fireman was occupied getting his seat adjusted to his liking. Work continued" --

What work?

A On the seat.

Q "Work continued between shop and the lead at the yard office."

Is that right?

A That is right.

Q During that move where was the head trainman when they were going between the lead and the yard office?

A He walked ahead and lined the switches and rode the front of the engine on the engineman's side.

Q I see. Now, No. 10 is again a Trainmaster, 8900. Under "Details of Duties" you say:

"Fireman stayed in cab

Alyth to Bassano. One car to

"lift at Bassano and
fireman sat on seat till
engine back on train. When
engine stopped moving fireman
checked cooling water and
drained reservoirs."

You were in the cab of this unit over
the entire trip, Mr. Russell?

A No, I didn't go to Medicine Hat.

Q Well, the report says from Alyth to
Bassano?

A Yes.

Q And under "Additional Comments" --

MR. LEWIS: The next comment is
funny.

THE CHAIRMAN: Pardon?

MR. LEWIS: I said that the
next comment has a little humour.

MR. SINCLAIR: I think it not
only adds humour but is quite instructive,
as I will argue later.

MR. LEWIS: All right.

BY MR. SINCLAIR:

Q Under "Additional Comments" you say:

"This engine equipped with
one seat only on either side
of cab. Fireman and head
end trainman tossed for use
of seat on left side.

Trainman lost the toss and
sat on a box in centre of

"cab with his back to direction of motion. Fireman made eight running inspections from rear window his side and engineer three inspections from rear window his side. Fireman called all signals observed from his side. All signals were called and acknowledged. Trainman made three inspections outside cab on the right side, all others through rear window both sides. Signals were given to the engineer by head end trainman when lifting car of stock at Bassano."

In view of my friend's comment, I think I should like to say to the Commission now that in my opinion this observation demonstrates most clearly that there is only work for two men in the cab of a freight train, and the actions of the men themselves in this instance demonstrate that in a very clear way. That will be my submission to the Commission in due course.

BY MR. SINCLAIR:

Q. Page 11, you rode the cab here from Medicine Hat to Alyth except when you went back on the second unit for a short period, is that correct?

A. Yes sir.

BY THE CHAIRMAN:

Q. These are road switchers?

A. Yes.

BY MR. SINCLAIR:

Q. These are road switchers, sir. Under details of duties performed by fireman en route:

"Check cooling water, drained reservoirs both units. Out of cab mile .5 to 2 checking leading unit. Stopped at Brooks for inspection and fireman drained reservoirs check water, leaving Brooks. He took his lunch back to the second unit where he sat and ate to Bassano (30 miles). Stopped for inspection ^{drained} ~~Gleichen~~ and again ^{drained} ~~checked~~ water reservoirs.

THE CHAIRMAN: Did I understand you earlier, Mr. Sinclair, to say you would have expert evidence as to these diesels on the equipment, what was involved in inspections etcetera?

MR. SINCLAIR: That is right, I will have that, sir.

BY MR. SINCLAIR:

Q. Now, was the train moving for this 30 miles when you say the fireman was back in the second unit eating his lunch?

A. Yes.

Q. Where was the head trainman?

A. The head end trainman was on the leading unit in his seat.

Q. Under additional comments:

"Engineer made 8 running inspections thru open side window. Fireman made 22 running inspections. Two of them thru rear window on engineer's side the other ^{through} ~~three~~ rear windows on the left side. All signals were called and acknowledged, except of course fireman did not answer 11 block signals due to his being out of the cab."

That is when he was out of the cab for his lunch in the second unit?

A. Yes.

Q. Going back to 11, the total time of that trip from Medicine Hat to Alyth was from 15.20 to 20.15, that is

four hours and 55 minutes, is that correct?

A. That is right sir, yes.

HON. MR. McLAURIN: Better than the Canadian eh?

MR. SINCLAIR: Oh, I don't know.

BY MR. SINCLAIR:

Q. No. 12 of Exhibit 123. Here is a Trainmaster. Details of duties performed by fireman en route:

"Fireman out of cab while standing for inspection at Gleisnen and Brooks. Gleishen checked cooling water and went to station office. Brooks drained reservoirs and checked cooling water."

Additional comments:

"Engineer made only four inspection from right side and the fireman six inspections from the left side. Trainman made two inspections from outside the cab on the right side all other inspections were made thru rear windows of cab."

No. 13, here again, two road switchers. Did you ride the cab 1 of the leading

unit, Mr. Russell?

A. Yes.

Q. Were you out of the cab for any time?

A. I was out for a short time there.

Q. When you were in the second unit sitting down keeping the crew under observation there?

A. Yes.

Q. Under details of duties performed by fireman en route:

"Fireman out of cab at Brooks and Cluny while standing for inspection. Checked water and drained reservoirs both stops. At Brooks fireman took over the engine and ran it to Alyth. Engineer occupied fireman's seat."

Mr. Russell, based on your experience as an engineer and from your observations in your opinion is it or is it not necessary or desirable for a fireman to change off with the engineer to give the engineer a rest?

A. No, it is not desirable for giving him a rest.

Q. Is it desirable for any reason?

A. No, just the opposite. The only time

I put a fireman up in the seat was to spell him off on the scoop, to give him a little rest.

Q. That is, in the steam days you used to take steps to give the fireman a rest from handling the scoop?

A. That is right.

Q. Was this fireman a passed man and was he giving the fireman any training?

A. No, this man was a passed man and a good man. He was doing a good job.

Q. He didn't need training?

A. No.

BY THE CHAIRMAN:

Q. It is 178 miles, the length of this trip?

A. Yes sir.

Q. How far is it from Medicine Hat to Brooks?

A. To Brooks is 67 miles, sir.

Q. Therefore, from Brooks to Alyth would be 111 miles?

A. Right.

Q. And that was the distance that the fireman ran the train?

A. Yes.

Q. And the engineer took over the fireman's seat?

A. That is right.

Q. Now, are you able to say with respect to the engineer on that 111 miles whether the engineer got off the seat and made any inspections of any kind?

A. Made any inspections? He was out around the engine at Cluny.

Q. But while it was running?

A. While it was running, no.

Q. I don't mean running inspection, but any inspection of motive power?

A. No, he didn't make any inspections.

BY MR. SINCLAIR:

Q. The engineer, when the fireman was running, didn't go back to the second unit at any time?

A. No.

Q. Or out on the run-way of the first unit?

A. No he didn't.

Q. Under additional comments:

"Signals were called and acknowledged during trip.

Engineer made 12 running inspections 4 from right side and 8 from left side. Fireman made 18 running inspections, 8 from left side and 10 from engineer's side. All inspections

"made from rear cab windows".

No. 14, road switchers again. My note is you road the leading unit the entire trip except for a short time in Gleishen, is that correct?

A. Leaving Gleishen, yes.

Q. And when you were out at Gleishen, out of the cab, you were in the second unit keeping the crew under observation?

A. That is correct.

Q. I think this one according to my notes speaks pretty much for itself, is that right, Mr. Russell?

A. Yes, it is normal.

Q. No. 15, here is again two road switcher units. You rode the cab of the leading unit for the entire trip here, is that correct?

A. Yes sir.

Q. And my note is that I think possibly this also speaks for itself. No comment needed on that one?

A. No, I don't think so.

MR. SINCLAIR: Except that I might draw to the Commission's attention on No. 15 what might be of some use that the fireman on this unit did not leave the cab at any time or perform any duties.

BY MR. SINCLAIR:

Q. Now, Mr. Russell, your observations here are detailed observations of 15 trips and yesterday you gave two detailed observations of yard movements, one with a yard crew and one by a road crew and on those observations that you have given to the Commission what would you say from your other work as a supervisor on diesels or from your work on diesels, would you say they were typical or not?

A. I would say they would be typical trips.

Q. Now, Mr. Russell, in your opinion based on your experience in yards both as a fireman and as an engineman running both steam and diesel power can a fireman in your opinion perform any useful service on a yard diesel or can he not?

A. I don't know of any useful service that a fireman can perform on a diesel yard engine. Myself, I would not like the job at all as a fireman on a diesel yard engine.

Q. Why?

A. Because of the set up on it. He has to sit there for eight hours approximately, for the length of the shift and we won't let him do anything for diversion and it

would be a pretty monotonous or hard job to have to sit there and not be able to do anything for that length of time.

Q. Well now, from your observations and when you were running a yard diesel can you **or can you not tell** the Commission as to whether what you have just expressed as your attitude was it or was it not obvious with the men that you were running with, the firemen you were running with?

A. Well, the jobs were all the same. They were in the same position seated in the cab **and as far as work was concerned** or duties except when we originally got those units they didn't differ. When we first had those diesel switchers brought to Alyth the company supplied the men with towels or cleaning towels and material and they cleaned the engines and that gave them something to do.

Q. Cleaned them where?

A. All over the surface.

Q. Outside?

A. Outside and the trucks and all the painted work on the unit.

Q. When would they do the work on the engine, after they come in from a shift?

A. Oh no, while they were on shift.

Q. While they were switching?

A. Yes, they would be doing that work while they were switching too.

Q. How long did that go on?

A. I don't recall just when, but when the older men that first started on them got off the engines and took other jobs or held jobs they liked that was when it ceased being. I don't know whether the company took the cloth away or what happened, but they don't do that now.

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Foll.

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BY THE CHAIRMAN:

- Q I have not a clear picture of what is involved in this work?
- A If I may say, it is just like polishing a car, cleaning a car.
- Q What would they polish?
- A All the cover, the painted portion of the diesel, outside the cab.
- Q Above the deck?
- A Above the deck, and they did the trucks.
- Q Not surely when the engine was operating?
- A No.
- Q You said this was being done while they were operating, as I understood?
- A Yes, but not the trucks; they would get them while they were sitting waiting for a move.
- Q When the engine was moving the fireman was out on the deck with a cloth polishing the painted surface?
- A That is right.
- Q All the time?
- A Oh, no, but they did keep these engines -- we were pretty proud of these engines then and they were real clean and nice kept.

HON. MR. McLAURIN: It is always that way with a new car.

THE WITNESS: They kept them a long time; they really did look good.

--- Recess.

--- After recess.

GEORGE RUSSELL, recalled

EXAMINED BY MR. SINCLAIR:

Q Mr. Russell, based on your experience and your observations over the years since diesels were running in your territory, what is your view as to the need and requirement of a fireman on road diesels in freight service for any purpose?

A Well, Mr. Sinclair, I have been around engines, trains and yards for quite a long time now, since 1925, and from my observations and experience and the safety factors -- I have been taught and brought up on safety, safety has been pounded into me since I started with the road. I took a keen interest in safety myself and I am responsible for safe operations on a portion of the road on the Alberta District, the Brooks Subdivision. I think from my experience and observations during those years that we can operate these trains and engines safely and efficiently without fireman on them.

Q These trains mean what trains?

A Freight trains.

MR. SINCLAIR: Please answer my friend.

BY MR. LEWIS:

Q Mr. Russell, when did you reach the conclusion that a fireman on a freight diesel is unnecessary and that the job is boring and undesirable?

A That was obvious at the time we first got them, Mr. Lewis.

Q That was in 1945?

A 1945 or around that time.

Q And it became obvious to you right at that time?

A Yes. Unthinkingly I realized that there was a job to do, we had been accustomed to firing, using coal and the injectors to supply the boiler and so on, and of course when ^{these} ~~the~~ things came that eliminated that.

Q I would gather then you had no experience with yard diesels in Calgary or elsewhere which suggested that a fireman has been any help at all in connection with safety?

A No, I did not.

Q Mr. Russell, from 1943 to 1945 you were Local Chairman of the Brotherhood of Locomotive Firemen and Enginemen, is that right?

A That is right.

THE CHAIRMAN: A nod does not go down, just say "yes" or "no". Did you say "yes"?

THE WITNESS: Yes.

BY MR. LEWIS:

Q Mr. Russell, I show you a letter dated April 18, 1948, which purports to be written in Calgary, Alberta. Is that your signature?

A Yes sir.

MR. LEWIS: This is a letter addressed to Mr. W. L. Druce, General Chairman, Brotherhood of Locomotive Firemen and Enginemen, Montreal, Quebec and dated Calgary, Alberta, April 18, 1948.

EXHIBIT NO. 124 -- Letter, April 18, 1948, to General Chairman, Brotherhood of Locomotive Firemen and Enginemen

BY MR. LEWIS:

Q Will you be good enough to read that letter to the Commission?

A It is addressed to Mr. W. L. Druce, General Chairman, Brotherhood of Locomotive Firemen and Enginemen, Montreal Quebec, and dated Calgary, April 18, 1948. It reads:

"Dear Sir and Brother:

The following is information you request in connection with diesel engines working in this district.

Question 1. Number of diesel electric locomotive operating here is five.

2. Number operating without assigned helper is nil.

3. Number operating in road service is nil.

4. Number assigned to transfer service, nil.

5. Number of accidents with no helper assigned, nil.

6. No accidents on record or file.

7. Number of accidents reported with helper absent from cab at the time of accident is nil.

8. Number of helpers disciplined on account being absent from cab is nil.

"9. Number of engineers disciplined on account being absent from cab is nil.

10. Number of helper disciplined for sleeping or reading is nil.

I may add here that diesel engines are used to move transfers between Calgary and Alyth when required. In general work they operate over 13 unprotected crossings and as many more when used on alley work. On one occasion the helper on a diesel was able to avert a serious accident by bringing to the engineer's attention a car running back of the hump. In this terminal it is necessary for the engineer to be continuously asking the helper for information as to conditions affecting the movement of the engine, outside his range of vision. Helpers at this terminal are supplied with dusters and keep the power in a really creditable condition."

THE CHAIRMAN: Your voice is too low, Mr. Russell.

HON. MR. McLAURIN: Let Mr. Lewis read it. The witness has indicated it is his letter.

MR. LEWIS: What I am interested in is ~~is~~ the last paragraph of that letter which reads:

" I may add here that diesel engines are used to move transfers between Calgary and Alyth when required. In general work they operate over 13 unprotected crossings and as many more when used on alley work. On one occasion the helper on a diesel was able to avert a serious accident by bringing to the engineer's attention a car running back of the hump. In this terminal it is necessary for the engineer to be continuously asking the helper for information as to conditions affecting the movement of the engine, outside his range of vision. Helpers at this terminal are supplied with dusters and keep the power in a really creditable condition.

Helpers watch and volunteer information from their side but engineers are required to ask for information to protect themselves in case of an accident taking place on the left side.

" Trusting this information
will be satisfactory to you,
I remain.

Yours fraternally,

(sgd) George Russell."

BY MR. LEWIS:

Q I suppose that reference to helpers
being supplied with dusters is what you
were referring to earlier about these
new engines and keeping them, as you
say, in a really creditable condition?

A Yes.

Q If, Mr. Russell, you had reached the
conclusion from the first day in 1945
that a helper was not needed, how do you
explain your comments in this letter to
Mr. Druce, in April, 1948?

A In that letter -- you asked me my personal
comment; in that ~~that~~ letter I was answering for
Lodge 635 and the information would be
supplied to me to write that letter.

Q That reference I take it would be to the
ten questions which were asked you and
which you answered, such as the number
of diesels operating in your district
and so on?

A Yes.

Q But this last paragraph is your own.

It reads: "I may add here" and then you go on to say several things. In The first place you say that on one occasion a helper on a diesel was able to avert a serious accident by bringing to the engineer's attention a car running back of the hump. You were telling the truth when you wrote this, were you not?

A No doubt I -- well, possibly I did not see or know that. It would be told to me. I have no recollection of seeing that myself.

Q Have you any recollection of being told?

A No, I have not.

Q When you wrote this letter, Mr. Russell, you were undoubtedly trying to tell Mr. Druce truth as you are in the witness box here?

A That is right.

Q So that that incident you no doubt believed it happened?

A Yes.

Q Or you would not have put it in?

A Yes.

Q Is not that right?

A Yes.

Q So that that is one incident in your experience which you related where a helper on an engine was able to avert a serious accident; is that right?

MR. SINCLAIR: Mr. Chairman, the witness has just told Mr. Lewis that he has no recollection of being there in the case of that incident, and in writing that letter it would have been told to him by somebody else. My friend, having got that answer from the witness, has just taken it and said, "You have told me" or something like that, "that in your own experience you have had one incident".

THE CHAIRMAN: What was the question?

--- Reporter reads:

"Q. When you wrote this letter Mr. Russell, you were undoubtedly trying to tell Mr. Druce the truth as you are in the witness box here?

A. That is right.

Q. So that that incident you no doubt believe it happened?

A. Yes.

Q. Or you would not have put it in?

A. Yes..

Q. Is that not right?

A. Yes.

Q. So that that is one incident in your experience which you related where a helper on an engine was able to avert a

"a serious accident; is
that right?"

THE CHAIRMAN: I think the witness
can answer the question. What do you say?

THE WITNESS: That did not refer
to me personally, that question, did it?

THE CHAIRMAN: Just read the
question.

--- Reporter reads:

"Q. So that that is one incident
in your experience which you
related where a helper on an
engine was able to avert a
serious accident; is that
right?"

BY THE CHAIRMAN:

Q Do you understand the question, Mr.
Russell?

A It is not an incident in my own experience.

Q You answer the question any way you like.
As long as you understand the question and
it is a proper question you can answer it
and make any explanation you like.

THE WITNESS: No, Mr. Lewis, I
don't recall that incident. It is not a
personal experience. I didn't see that.

BY MR. LEWIS:

Q Have you known of any other case or have
you not known of any other case?

A No, in my experience I never did have

such an experience.

Q Have you ever heard of any other case that was brought to your attention?

A No, I cannot recall it.

Q You cannot recall any other case?

A No.

Q And you are now suggesting that this case which you cited in your letter to Mr. Druce of April 18, 1948, did not happen?

A No sir, no.

Q Are you agreeing then that it did happen?

A I agree that it did happen.

Q You would agree that it must have happened or you would not have written the letter?

A That would be apparent, yes.

Q And if you extend the umbrella of experience a little to include the experiences of other people about which you were told and which you believed, and this is an incident in your experience that you told Mr. D_ruce about, is it not?

THE CHAIRMAN: Well, I am not sure that that question does not take in too much territory, Mr. Lewis. If you had the witness say whether he had knowledge of any other experiences of the kind it would be proper, but without that I think not.

MR. LEWIS: Right, sir.

BY MR. LEWIS:

Q Now then in the last sentence you say:

"In this terminal it is
necessary for the engineer
to be continuously asking the
helper for information as to
the conditions affecting movement
of the engine outside his
range of vision."

That is the statement which you made.

That is your opinion in that letter, is
it not, Mr. Russell?

A It would not necessarily be my own opinion.
In writing that I was writing for the
group of men whom I represented there.

Q Are you serious in suggesting to the
Commission that in that sentence you were
not expressing your view?

A I couldn't have as broad a view as that.
That covers a whole lot more than I could
personally cover.

Q Why, Mr. Russell? You told us yesterday
your experience was all over the Calgary
yard?

A Yes, that is true.

Q You know the Calgary terminal very well?

A Yes.

Q And you knew it then?

A Yes.

Q And why is that statement of yours not entirely a statement within your own experience?

A I do not have a recollection of having that experience to that extent or as broad as that.

Q You mean that when you were writing that letter to Mr. Druce and when you put in that sentence, that "in this terminal it is necessary for the engineer to be continuously asking the helper for information as to conditions affecting the movement of the engine outside his range of vision" -- are you now saying when you wrote that sentence to Mr. Druce you were not telling him the truth?

A I would be telling him the truth as I knew it.

Q Yes, the truth as you knew it in April, 1948. Is that right?

A Yes.

Q How could you in that case have reached the conclusion in 1945 that the diesel helper was unnecessary in the yard?

A Because of the obvious difference in the engines.

Q Oh yes, you mean there was not any firing to be done?

A No firing to be done or work to be done on it.

Q You told us just a few minutes ago that you were very safety conscious and have a great deal to do with safety?

A That is right.

Q And that statement in your letter of April 18, 1948, did not that have to do with safety, about the engineer having to ask the fireman about the movement?

A Yes, it would. It would be apparent from that that yard crews were not getting in a position or putting the engine in the position it should have been.

Q Then, the last sentence in that ~~par~~agraph is in these words:

"Helpers watch and volunteer information from their side but engineers are required to ask for information to protect themselves in case of an accident taking place on the left side."

Was that a true statement by you to Mr. Druce?

A It would be true to the extent that ~~it~~ was told to me.

Q You mean you did not know yourself?

A I don't recall a personal ~~sit~~uation that --

Q That what?

A That would put me in that ~~pos~~ition.

Q Put you in what position?

A Of being in a dangerous position with the engine requiring the fireman to help me.

Q Now, Mr. Russell, you were a fireman in the Alyth yard from 1942 -- in 1942?

A That is right.

Q Is my note right?

A Yes, in that period.

THE CHAIRMAN: That is the way I have it.

MR. SINCLAIR: He says that is right, Mr. Lewis.

BY MR. LEWIS:

Q Then you continued to be a fireman in the Alyth yard and on some subdivision -- my note is not complete --

THE CHAIRMAN: My note -- it is not complete -- is that in 1942 he was a fireman in the Alyth yard, in 1947 he became a pool fireman, and 1947 to 1949 fireman at Laggan and Brooks and spare engineman and then a regular engineman.

BY MR. LEWIS:

Q That is right, is it not?

A Yes.

Q Did you work as an engineer in the Alyth yard between September, 1947, and June, 1949?

A Infrequently. I did not have a regular job.

Q Assignment?

A No.

Q But you worked as an engineer?

A On occasions, yes.

Q And in June, 1948, you got a regular assignment as an engineer?

A On the road, yes.

Q Taking your experience as fireman and engineer in the Alyth yard, which started before the disels came, would that not be the source of your statement to Mr. ^{in your letter} Druce/of April, 1948?

A No, I would not say that it was the source.

Q What then was, Mr. Russell?

A I cannot just think of the background of that particular correspondence or --

Q Mr. Russell, are you in the habit of making statements in writing or verbally about the truth of which you are not certain?

A Well, in a case such as that I would be writing as I would be instructed. It would not have been my own personal observation.

Q Mr. Russell, will you read the first few words of that paragraph?

A The top --

Q Yes, "I may add here". You had answered all these ten specific questions. That is right?

A Yes.

Q Those are the questions which Mr. Druce asked you to answer and then you added this paragraph yourself. Is there any other meaning to those words?

A Well, for instance, "are used to move transfers", someone would have to tell me. I would not necessarily know that they did that.

Q You mean you would not know from your own knowledge that diesels were used in transfers between Calgary and Alyth when required? Is that what you are suggesting?

A Not unless I asked someone or unless I worked on a job where they were used.

Q Or unless you saw an assignment like that written somewhere?

A Or knew about it, yes.

Q Or unless you spoke to the engineer or fireman who had taken that transfer?

A I would have to get the information that way.

Q There are lots of ways in which you got information. In fact, you gave a great deal of evidence here about your information and what you gathered from your experience and observation. Is that right?

A Yes.

Q And that would be gathered in the same way, experience and observation you would gather when you wrote this letter? Is

not right?

A No, I cannot think that it would be because I could not gather all that myself.

Q All what?

A Well, for instance, I worked on a job on the "B" alley for quite a while. It might have been at that time, I don't know, but I would not know what was going on in the rest of the yard or other jobs. I would not see it.

Q What you are now saying -- correct me if I am wrong, Mr. Russell -- is that the letter which you wrote Mr. Druce on April 18, 1948, contained unreliable information?

A No, I would not suggest it was unreliable. I think the people I had talked to or asked about it were other fireman.

Q And the information therefore was accurate?

A I would believe it to be accurate.

Q Then, if this information was accurate in April, 1948, I repeat how could you have come to the conclusion that a helper on a yard diesel was unnecessary as long ago as 1945?

A From observation at that time, my own observation.

Q In 1945?

A Well, it would be -- I don't recall exactly when we got them.

Q You said yesterday and again today
1945.

A Well, after we had had them, yes.

MR. SINCLAIR: I wonder if I could make a request, Mr. Chairman, that Mr. Lewis produce from the Brotherhood's files the letter that Mr. Druce wrote to Mr. Russell.

MR. LEWIS: To which this is a reply. I quite agree. In fact, I thought it was that when I produced it.

MR. SINCLAIR: It might help Mr. Russell if you could orient him with that.

MR. LEWIS: I shall do that during the luncheon adjournment and have it with me this afternoon.

MR. SINCLAIR: Do you know now what the information was required for? Maybe you could tell the Commission.

MR. LEWIS: I do not remember accurately enough. My memory is it was only on the first ten questions that he answered --

MR. SINCLAIR: I was wondering if my friend, from his knowledge of the thing, could say what the purpose was, why they were gathering information from the various local chairmen. Would my friend know that?

MR. LEWIS: No. I shall bring the letter after lunch, Mr. Chairman, and whatever other information I may have at the time.

THE CHAIRMAN: You will be able to re-examine, Mr. Sinclair.

MR. SINCLAIR: I was just wondering whether my friend knew.

THE CHAIRMAN: Well, he is not subject to cross-examination.

MR. LEWIS: I was just going to say that, Mr. Chairman.

MR. SINCLAIR: I don't know. I can only guess.

MR. LEWIS: It is like some of the witnesses, Mr. Chairman.

MR. SINCLAIR: It may be that Mr. Lewis' witnesses are going to guess but as far as I am concerned and as far as I know the witnesses I have produced have not guessed.

THE CHAIRMAN: Very good. I think we will have the next question.

MR. LEWIS: Right.

BY MR. LEWIS:

Q Do you remember, Mr. Russell, whether as local chairman you had anything to do with discipline cases?

A Yes, I would have something to do. I don't recall any particular --

Q You would not recall whether you had any discipline cases involving look-out by the fireman?

A No.

Q You just don't remember?

A I just don't recall.

Q You cannot remember what cases you had in those years?

A That is correct, yes.

MR. LEWIS: I want to say here, Mr. Chairman, that those files are, of course, in Calgary. It was not until a couple of days ago that I was told Mr. Russell was here and one suspected that he might be a witness. It was not until yesterday I knew he was going to be a witness, and I may produce those if the files show anything of relevance.

THE CHAIRMAN: Very good.

BY MR. LEWIS:

Q Would you mind taking a look at Exhibit 121, Mr. Russell, the photograph of engine no. 784.

A Yes sir.

Q Am I right in thinking that the boiler goes right through the first cab in that photograph?

A Goes right through the first cab?

Q Pardon?

A Goes right through the first cab?

Q Yes. It does, does it not?

A I have never been on one of those engines, Mr. Lewis, and that is just what I understand.

Q Well, I suppose as an engineer and as a road foreman of engines, -- I do not

suppose, I know -- you would know a great deal more about these things than I do. This is also part of the boiler between the two cabs, is it not?

A The fire box portion, yes.

Q And in your experience would not the two be joined and go right through the cab?

THE CHAIRMAN: I think the witness said when that picture was produced that he had never seen a Camelback. That is a Camelback?

MR. LEWIS: Yes.

THE CHAIRMAN: He had never seen one, but all the discussion about the photograph that was put in was, as I understood it, that the boiler went right through, that the forward cab was two cabs, a separate cab on each side of the boiler.

MR. LEWIS: I missed that, Mr. Chairman. That is really the only point I was going to ask about.

THE CHAIRMAN: I suppose the witness cannot say he knows because he never saw one.

MR. LEWIS: No, he has not seen one.

BY MR. LEWIS:

Q Now, one little comment you made yesterday, Mr. Russell, I could not quite follow. You said -- correct me if I am wrong -- according to my notes that when the brick arch was introduced and the super-heating arrangement was introduced that made the job easier but that the work of the fireman was not reduced. Was that right or did I misunderstand you?

A It made a more efficient engine.

Q But did you also say that the work of the fireman was not reduced by the introduction of this super-heating arrangement?

A It would not be because bigger engines came out then.

Q I get you now. You would agree, in other words, that after the super-heating unit was introduced in steam engines then the consumption of fuel would be reduced quite considerably, wouldn't it?

A It would make some difference.

Q If I inform you that I read somewhere, as I have, that the fuel consumption is reduced by about 35 per cent with the introduction of super-heating apparatus would you from your experience know whether I likely would be right or not?

A No, I have no way of making a comparison of them.

Q Are you not finished?

A I say I would not have any way of making a comparison as before and after.

Q And if the consumption of fuel is reduced, in other words, if the engine requires less fuel it would follow, I suppose, that the fireman would have less work as far as the firing is concerned?

A Correct, yes.

Q So wouldn't you agree with me that the general statement that the introduction of the brick arch which also improves the burning of the fuel -- doesn't it?

A Yes.

Q And reduces the work necessary?

A Yes.

Q So the introduction of that and the introduction of super-heating must have reduced the work of the fireman, isn't that right?

A Yes.

Q Now, about this time that fireman would spend in the deck in the case of a stoker, Mr. Russell, if the stoker worked normally and there was no defect arose would the fireman have to spend any time at all on the deck?

A Yes, Mr. Lewis, on the Laggan

subdivision -- and that is where I did most of my stoker firing --

Q That is Calgary to Field?

A Yes -- we used a 5300 and 5400 class of engine. We took coal at Canmore and used Canmore coal and we had a lot of difficulty with that coal. The stoker functioned properly; it was not that the stoker did not function. It was the type of coal we had that did not function. Consequently, we had to use the scoop shovel, not to supplement the stoker which could put enough coal into it but we would use the scoop to put a bed of coal into it. It was light and it would go out the stack if you simply used the stoker. Consequently we did a great deal of hand-firing work in conjunction with the stoker.

Q For that reason, because of the kind of coal?

A Yes.

Q Had you any experience with a stoker on any other but the Laggan subdivision?

A Yes, I did on the Brooks subdivision.

Q Did you use the same kind of coal there?

A Not always. Quite often we had a better grade of coal for that work.

Q Well, suppose then if the stoker was not

defective and the coal did not give you the trouble you got from Canmore coal **would** you spend any time at all on deck?

A Yes, you would spend time on the deck.

Q Very little, though, isn't that right in that case?

A It would cut it down immeasurably. It would cut down the amount of time you would be on the deck.

Q You would almost say -- would you agree that in that case you would be on deck hardly any more with a stoker than you would with an oil burning engine?

A No, more than an oil **burner**, because you had incidentals on the job to take care of. Your firing of the engine, it was **necessary** to get down to see that it was fired properly. You would have lumps come on your firing plate that you would have to take off. It would build up and you would have adjustments to make because of the uneven firing. It would take a bit of care.

Q I suppose that is the time when you think it should take about 10 per cent of the time on deck?

A I would say that would be a good figure generally.

Q Would your experience be such as to

suggest that in the majority of stokers one had some trouble or other~~either~~ with the stoker or with the coal or would they be in the minority?

A On the west end - - that is the Laggan subdivision that I told you about that was continuous, we had that difficulty month in and month out. There was no exception in there for a considerable period of time.

Q And that would be the part, I suppose, where you would spend between 20 and 30 per cent of your time on deck?

A Yes, I believe you would, sir.

Q But would you have enough experience to say whether in the majority of cases the stoker or coal gave that kind of trouble or whether in the majority of cases it was much more normal?

A On that end I know that it was general because very frequently an engine would have to stop between --

Q You are still talking about the Laggan subdivision?

A Yes.

Q I am talking about do you have experience enough outside the Laggan subdivision to be able to tell me whether that kind of trouble was the exception for

C.P.R. engines or not. If you have not experience to base that judgment on just say so.

A No, my experience is limited to that district.

Q In other words, if I now understand your evidence -- correct me if I am wrong -- you say this experience of having to spend a great deal of time watching the stoker was on the Laggan subdivision because of the Canmore coal?

A Yes.

Q And then you had experience on the Brooks subdivision?

A No, I didn't fire an engine on the Brooks subdivision.

Q But where you had better coal --

A It was improved.

Q And where you would have you think a good ten per cent average of your time on deck?

A Yes.

Q And it is on the basis of those two subdivisions, your experience on the Brooks subdivision and on the Laggan subdivision that you arrive at the average 25 per cent/figure, is that right?

A That is right.

Q What were you, by the way, when you got ten demerit marks?

A What was I?

Q An engineer or fireman?

A An engineer.

Q That was running over a switch?

A Running through a switch.

BY THE CHAIRMAN:

Q Day or night?

A At night.

BY MR. LEWIS:

Q Where, by the way?

A In the Red Deer yard.

Q Was there a fireman with you?

A Yes sir.

Q What happened to him? Did he get any discipline?

A I don't know, the superintendent at Calgary was pretty much annoyed with me, I know, because it was a bull switch in the middle of the night and tied things up a bit but I don't think the fireman got anything.

Q Do you remember?

A I don't remember. I was not with him anyway.

Q What do you mean you were not with him?

A I mean he was not on the investigation, I don't think.

Q You don't think he was at the investigation?

A No.

Q There was an investigation?

A With me, yes.

Q I might see perhaps whether we have the file involved or ask Mr. Sinclair for it. Do you remember what year it was roughly? After the war ended or before the war ended?

HON. MR. McLAURIN: He was not an engineer until 1949.

THE WITNESS: After the war, yes.

MR. LEWIS: He was a spare engineer at certain periods.

THE CHAIRMAN: Yes, but not until 1947.

BY MR. LEWIS:

Q Then, it would be from 1947 on, would it?

A Yes, it would be in the mid-winter time too, if I recall right.

Q In the mid-winter time?

A Yes.

MR. SINCLAIR: I note from Mr. Russell's record that he was classed as an engineman in October 1945 but he didn't get on a regular run apparently until 1947. He may have got the odd one but I mean of any account.

BY MR. LEWIS:

Q Then, the next point that had me bamboozled was your statement that

you acknowledged block signals as a fireman and similar signals without looking to see what they were, is that right?

A No, I would look to see. I know what you are referring to. What I was saying was I would not be sitting up on the seat watching the place or places and if they were called or drawn to my attention I would look even if I was working. I might look out the engineman's side or just out the left side.

BY THE CHAIRMAN:

Q But the question is ~~is~~ did you?

A Yes.

Q Just listen to the question. When you acknowledged the signals in the cab when you were engaged in firing had you always seen the signal before you acknowledged it?

A No, I would not necessarily have seen it before I acknowledged it but that would be my cue to take a look.

Q Well, what you said, Mr. Russell, was that you would be engaged in hand-firing the engine?

A That is right.

Q And the engineman would call a signal?

A Yes.

Q You acknowledged that signal, that is right isn't it?

A Yes.

Q You have just said that before you acknowledged it you had not necessarily seen the signal. Now, the question is did you see the signal after you acknowledged it?

A If I was in a position where I could not see it approaching it I would see it after I acknowledged it.

Q So that when the engineer called a signal to you on the occasions you were engaged in hand-firing and you acknowledged it had you either saw the signal before you called out or afterwards, that is what you mean?

A Yes.

BY MR. LEWIS:

Q Perhaps it is cleared up. When the engineer shouted or called "green block" -- he could call that?

A Clear board.

Q "Green block" or "green board" could he say that?

A Yes.

Q Then, what would you say?

A "Green block" or "green board"

Q Repeat it?

A Yes.

Q You would repeat what he said?

A Yes.

Q And you would do that before you knew whether it was green, yellow or red, would you?

A Yes, under those circumstances where I would be working I would ~~not~~ answer him and then take a look as I say out of either side.

Q You mean you might just physically call the same words he called but then look out to assure yourself that it was right?

A Yes.

Q And if it were not you would say so, is that right?

A That is right.

Q You just said it was likely I would do that. Yesterday you just said "I acknowledged signals" if I remember correctly "without knowing what they were". That was not so?

A I had not thought that. I did not intend to give that impression if I did.

Q You did not intend to give that impression?

A No.

Q Maybe I misunderstood you, Mr. Russell, and therefore if you acknowledged a signal you either knew it was right or immediately assured yourself that it was so, is that

right?

A Yes.

Q And that it was your duty to do,
wasn't it?

A Yes.

Q You would have been violating a very
important rule if you had acknowledged
the signal without knowing what it was,
wouldn't you?

A If I acknowledge it without knowing what
it was I don't think so. If I did not
look at it I would say I was.

Q What you are saying now is -- when you
were using the "acknowledging" all you
meant was that you repeated the words
the engineer said?

A That is right.

Q And sometimes you saw the signal
before you repeated those words, some-
times you repeated those words and then
looked?

A That is right.

Q But unless you assured yourself that
the words the engineer called were right
you would have been guilty of a serious
violation of rules, isn't that right?

A Yes.

THE CHAIRMAN: Had we not
better look at that rule?

MR. LEWIS: In the old rule book

it is 34 but I didn't want to cite it because I didn't offhand know whether it was the same. This new rule book came in in 1951 and Mr. Russell was a fireman quite a few years before that.

THE CHAIRMAN: That is what I had in mind, Mr. Lewis, the last sentence of rule 34:

"All members of engine and train crews must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine."

And my recollection of the evidence -- it may be wrong -- but of some of the evidence is that a man was not disciplined in such case if he was engaged in other necessary duties and the firing of the engine took precedence.

MR. LEWIS: That may well be so, Mr. Chairman. I would hope that if the employee was doing what he was supposed to do at that time and could not see the signal the company would not discipline him.

THE CHAIRMAN: If you were in Mr. Sinclair's position you might be putting forward that petition.

MR. LEWIS: It is because you put forward the proposition that if it is not practicable to talk he should not talk.

I was going on to say what concerned me about this witness' answers and several other things of that sort and if he said he acknowledged them without seeing them I don't see where this "where practicable" stops him. If he could not see it he just keeps quiet about it; he doesn't lead the engineer astray and everybody else astray by saying it was right.

MR. SINCLAIR: I think if Mr. Lewis wants to give some evidence like that he had better get in the box and let me cross-examine him.

MR. LEWIS: I was not giving any evidence.

MR. SINCLAIR: You said mislead the engineer and everybody else.

MR. LEWIS: It is a conclusion I draw from the fact that he said that without seeing the signal.

THE CHAIRMAN: Well, gentlemen, I was responsible for this because I wanted to make sure that the witness understood the question and what was involved in this question and it seemed to me when you were putting to him an infraction of a rule that you were perhaps involved in the construction of the rule and that is why I suggested you look at it because there is another point of view on that rule.

MR. SINCLAIR: I would like to say too in view of my friend's remarks that I would not agree with his submission. I would say that if the man acknowledged the signal as it was called by somebody who could see it it would provide a check by him saying to the engineman "you said green block, you said green board" and with all due respect to my friend's knowledge of the matter I would say that that would be a compliance with the requirements if the man was in a position where he had work that required him to be somewhere where that was all the acknowledgement he could give and I would so argue on the interpretation.

THE CHAIRMAN: Well, the witness said that ~~he~~ called that out to acknowledge it without seeing it ~~before~~ or after and that that was an infraction of the rule.

MR. SINCLAIR: I heard him say that.

MR. LEWIS: I was trying to find, Mr. Chairman, the exhibit where the rule instructor's notes are to see whether the same rule, 34, applied in the new book which had in the old book.

MR. SINCLAIR: I would like to say to the Commission with regard to that book --

THE CHAIRMAN: Which book?

MR. SINCLAIR: This book which
in
has now been put/as an exhibit. Mr. Doull
who is sitting here assured Mr. Lewis and
he the Commission that this was put out by
Mr. Raines, the Chief Rules Instructor. We
have been in touch with Mr. Raines and Mr.
Raines said he never did issue any sheets.
Mr. Raines further says that he has checked
with his secretary and we have spoken to the
secretary and she has no recollection of
Mr. Raines sheets and I have also spoken to
other people who were there when Mr. Doull
was there and they say to me that these sheets
were not given out, that people kept their
own notes and that some fellows went and typed
them and they talked over them at night,
and the notes, I am further instructed by
people who know the rules, are full of a
number of half explanations and matters of
that kind.

THE CHAIRMAN: Well, may I just
be clear about this: this record that I
have been given, since Exhibit 48, is a
red covered Uniform Code of Operating
Rules Canadian Pacific Railway Company and
it contains a number of smaller printed
pages and then larger interleaved typed
sheets. It is the large typed sheets you

are referring to?

MR. SINCLAIR: That is right, sir. Mr. Lewis when he introduced it, you remember I questioned it because I had never heard of this. I had no instructions on it and Mr. Doull who was sitting there and advising him said they were passed out by Mr. Raines the Chief Rules Instructor.

THE CHAIRMAN: Who was Mr. Doull?

MR. SINCLAIR: He was the man advising Mr. Lewis.

MR. LEWIS: He is right here, Mr. Chairman. I can either have him identify this or we can lay the exhibit aside and have him identify it when he gets in the witness box which he will do some day and not refer to it until that point.

THE CHAIRMAN: Perhaps that is the better way.

MR. SINCLAIR: That is what I was going to suggest in view of the instructions I have.

THE CHAIRMAN: I think perhaps we had better adjourn.

--- At 12.35 the Commission adjourned
until 2.00 p.m.

- 2928 -

Thursday,

April 4, 1957

AFTERNOON SESSION

--- The Commission resumed at 2.00 p.m.

GEORGE RUSSELL, recalled,

MR. LEWIS: Mr. Chairman, as I undertook in relation to Exhibit 124, a letter from Mr. Russell to Mr. Druce, I would like to file, and suggest that it be called Exhibit 124-A, two letters.

THE CHAIRMAN: You had better make them Exhibit 124-A and 124-B.

MR. LEWIS: Exhibit 124-A consists of a letter from the then Vice-President of the Brotherhood of Locomotive Firemen and Enginemen, whose name was T. Mattingley, dated March 17, 1948, which was addressed to the General Chairman of each of four railways, namely, the C.P.R., the C.N.R., the Ontario Northland and T.H. and B.

THE CHAIRMAN: To the General Chairman of what?

MR. LEWIS: The General Chairman of the Brotherhood, in relation to each of the four railways I have named.

THE CHAIRMAN: That is the Firemen's Brotherhood?

MR. LEWIS: The Firemen's Brotherhood.

Exhibit 124-B is a letter sent by Mr. W.L. Druce, who was General Chairman of the Brotherhood of Locomotive Firemen and Enginemen for the Canadian Pacific Railway. This letter is dated March 20, 1948, and was addressed to the local chairmen of the same Brotherhood for the lodges of employees employed by the C.P.R. One of the lodges whose number is given on this letter by Mr. Druce is 635.

BY MR. LEWIS:

Q. Mr. Russell, I understand that is the lodge of which you were the local chairman?

A. Yes.

MR. LEWIS: Perhaps, Mr. Chairman, if you will allow me I will read at least the relevant parts of these letters.

THE CHAIRMAN: Very good.

MR. LEWIS: The first one from Mr. Mattingley is addressed to the General Chairmen, and reads:

"Dear Sirs and Brothers:

It will be appreciated if you will be so kind as to furnish me at your earliest convenience with

"the following information with regard to Second man to be assigned in cab of diesel electric locomotives in operation on your respective railways."

Then there follows the ten questions to which the witness' letter replied. The last paragraph reads:

"It is appreciated that it may be necessary for you to obtain the requested information from your respective local Chairmen. It is considered also that you will agree that the above information is essential when progressing proposed agreement governing basic daily rates and rules applicable to firemen (helpers) assigned to diesel electric locomotives.

Your early consideration will be appreciated."

This letter would in the normal course be addressed to Mr. Druce as one of the General Chairmen.

Then Mr. Druce sends the following letter to the local chairmen on the C.P.R.



"Dear Sirs and Brothers:

The attached communication from Vice-President T. Mattingley, arises out of the probability that the railways will endeavour to show that the second man on diesel electric locomotives is not necessarily an important consideration of safety.

It is to be expected that the railways will enter a number of exhibits covering mishaps and other circumstances for consideration by the Board of Conciliation to sustain this contention. I realize, however, that much of this information requested would not be in the form of files with the Local Chairmen but they might have knowledge of these events which would be of material help if the railways enter the exhibits which we expect they intend doing.

In the circumstances, however, I can only request that you furnish files covering cases of mishaps or such cases of helpers being found absent or not carrying out their duties. We could make

"copy of the files and return them to you.

Any information you could furnish in respect of the attached questionnaire would be very much appreciated.

With best wishes, I remain,

Fraternally yours,

W. L. Druce"

BY MR. LEWIS:

Q. Do you recall receiving these letters, Mr. Russell? It is a long time ago now.

A. I don't really recall them.

MR. LEWIS: Mr. Chairman, I shall have Exhibit 124-A and 124-B photostated and file them.

THE CHAIRMAN: Have they been marked?

MR. LEWIS: I have just marked the number on them.

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THE CHAIRMAN: Perhaps we had better let the Secretary mark them, and then you can take them and have them photostated.

EXHIBIT NO. 124-A: Letter dated March 17, 1948 from Mr. Mattingley to General Chairmen B.L.F.&E.

EXHIBIT NO. 124-B: Letter dated March 20, 1948 from W.L. Druce to Local Chairman of C.P.R. lodges.

BY MR. LEWIS:

Q. Mr. Russell, have you been on a 5700 oil burner?

A. Yes.

Q. Where is the brakeman seated on that engine?

A. The only place I was on one was in the yard. I don't know - it may not have had one.

Q. You wouldn't know whether it was in the centre or on the side, or where it was, on the road engine?

A. No.

Q. In that connection, as to the seats on the diesel engines, you may have been here when one of the witnesses said that

in his experience the Trainmaster was the only one where the fireman sat front?

A. Yes.

Q. And the brakeman sat behind?

A. Yes.

Q. Your experience is that on them the brakeman sits front?

A. That is right.

Q. And the fireman sits behind, is that right?

A. That is right.

MR. SINCLAIR: The witness had something further to add, I think.

THE WITNESS: I was going to say I was a little surprised at that, because all the time I have seen them they have been seated in that order.

BY MR. LEWIS:

Q. I suggested to one of the other witnesses that my instructions are that some other people seem to have had the experience that on road switchers other than Trainmasters the fireman sat front and the brakeman sat back. That is not your experience?

A. No, it is not.

Q. Is there any rule as to who is to sit where, that you know of?

A. No, I don't know of any rule. It was

just that that is the practice.

Q. That you have experienced?

A. That I have experienced.

Q. There hasn't been any instructions to that, that you know of?

A. I do not know of any.

Q. You did not, and you do not now know of any, is that right?

A. That is right.

Q. Is it likely that the practice may vary from district to district, so far as you know?

A. Well, I don't know other than --

Q. Other than your own experience?

A. Other than what I have seen, yes.

Q. When you were Road Foreman of engines were you by any chance the one who in your district told the fellows, the firemen and brakemen where each was to sit? Could that have happened?

A. No. I don't ever recall that coming into the picture or being discussed or being thought of actually.

Q. In any case you would agree with me, would you not, that you have just as good a view from one seat as you do from the other, from the front or rear seat?

A. Yes.

Q. Now, I am instructed that for quite a while there were special instructions in the time card governing the Laggan subdivision, requiring a trainman to ride the top of cars down a 2 per cent grade from Stephen on, are you aware of that?

A. That was a long time ago, before they had the equipment they have now.

Q. Before they had the automatic brakes, I suppose?

A. Well I wouldn't know just what type they had, but in my experience they never did it.

Q. Not since 1925?

A. No.

Q. You don't know of it?

A. No, they did not ride on top.

Q. In your experience it would be long before that?

A. Before that.

Q. When you were an engineer and a fireman were there not occasions on trips when the head end brakeman was not in the cab for look-out purposes, when he did something else?

A. When the train was in motion?

Q. Yes.

A. No.

- Q. You say, when the train was in motion:
Suppose the train had stopped and afterwards
there was some switching and some flagging
to be done?
- A. During switching, yes, he would be on the
ground.
- Q. He would be on the ground and might not
be there to keep a look-out on the left
side of the engine, is that right?
- A. Yes.
- Q. And did you have any experience where
the front end brakeman had to go flagging?
- A. No, I haven't any recollection of the
front end man going flagging.
- Q. Mr. Russell, if you went back to being
an engineer now, either in the yard or
on the road, would you say that you
would not feel a little less secure
if the qualified helper was not on the
engine with you?
- A. No, I can't say that I would.
- Q. You would feel just as secure?
- A. Just as secure.
- Q. That is, if you went back as an engineer?
- A. If I went back as an engineer now,
yes.
- Q. In the many years that you were firing,
were you ever responsible for avoiding

or averting an accident by information which you conveyed to the engineer? Do you recall anything like that?

A. No, I did not.

Q. You did not, or you do not recall?

A. I do not recall.

Q. Have you heard of any occasions through your many years of experience of a fireman being in a position to avert an accident, outside of the one you quoted in your letter to Mr. Druce?

A. No, I did not come across any such an incident.

Q. You did not come across any?

A. No.

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Q You said yesterday, if my notes are correct, that in working in the yard as engineer or something, I think you said, or for industrial switching, that in that situation you would not be concerned for a look-out forward; did you say that?

A Yes.

Q You meant to convey that, did you?

A That I would not be concerned about a look-out forward.

Q Yes?

A Yes.

Q You meant that, did you?

A Yes.

Q Why would you not be concerned?

A Well, I could see myself.

Q Pardon?

A I could look myself.

Q You could look yourself. Would you always be able to see both sides yourself?

A No, there may be situations then where you would not be able to see. You are thinking of other than ordinary situations?

Q Well, what do you mean by ordinary situations? What would be an other than ordinary situation? You are doing yard work; you are a yard engineer; you have lots of experience on that, I think?

A In a curve.

Q On a curve or if you are looking back to get signals, back in the direction opposite to the direction of the movement in order to get signals; in any of those situations then you would not be able to see forward or to see on both sides; is not that right?

A Well, you could see forward all right even though you are getting signals. Normally in running an engine you do not look constantly in the direction.

Q You would be looking, you would be turning, swivelling your head?

A You look and see that there is a distance ahead that is clear, and the other direction --

Q During the time when you are looking in the other direction you still would not be concerned about a look-out ahead in the direction of your movement? Is that what you are saying?

A Yes.

Q You just would not care about it?

A Not under ordinary circumstances, no.

Q What do you mean by ordinary circumstances?

A I you can look ahead, which you do;

you look ahead and there is nothing there for the distance that you are working in, you are not concerned about it.

Q Is not something likely to happen during the time that you are looking the other way? Are you never concerned about that?

A Well, that comes in your judgment of what you could see.

Q You would agree, would you not, that even in a yard and industrial switching you would be concerned about a forward look-out and about a look-out on the left side; surely you would be?

A No. I cannot visualize a situation where you could not observe ahead.

Q You cannot visualize such a situation?

A No.

Q When you were a fireman, Mr. Russell, do you recall ever whether you became a little sleepy if your shift was into the night?

A Yes, I probably did.

Q And in fact that might have happened to you when you were an engineer?

A Yes.

Q And if you became a little sleepy when you were a fireman or when you were an engineer; as a fireman,

you would get up out of your seat and try to get yourself alert?

A Well, as a fireman I never had a job where there was not something to do.

Q You have just told me you became a little sleepy on occasion even when there was something to do, did you not?

A No; there is a difference firing a steam engine. Even though it wasn't a hard job you have enough to do and even if you were sleepy you are going to be kept alert by doing that.

Q You did feel a little sleepy sometimes?

A Yes, could be.

Q And you would get up and try to get yourself alert, whether it was shovelling coal or something else; is not that right?

A Possibly it would be.

Q When you were an engineer that might happen to you and then would you possibly get off your seat and just stretch yourself out for a moment and sit back again; is that not right?

A Could be, yes.

Q Why do you think there is something special about this fireman in Exhibit 122 who you say had a little

difficulty keeping himself alert?

I think that is Sheet No. 2 of Exhibit 122?

A Later on in the night he got slouched down on the seat. Prior to that he had been up and looking around. Sometimes he was watching the engineman over on his side.

Q He was a young fellow?

A A young lad, yes.

Q He might have been out late the night before?

A I don't know.

Q There really is not any significance as to the operation about the fact that this young fellow appeared to be a little sleepy, is there?

A It was to me an indication of how he felt because he had nothing to do but sit there.

Q That is the conclusion you came to?

A Yes. If he had had some work to do he probably would not have slouched down and been less alert.

Q I suppose you would have noticed that in the other cases which you observed and if you had you would have taken a note of it and written it down?

A Yes.

Q You made 15 trips in Exhibit 123 and

two observations in Exhibit 122 and you just found this one fellow about whom you make that comment?

A That was in a yard trip.

Q But you made two observations in the yard, and 15 observations on the road?

A One at a time and one in the yard.

Q And 15 observations, that is right?

A Yes.

Q And in each case there was a fireman-helper on the diesel?

A That is right.

Q If you had noticed it in any other case you also would have written it down?

A Yes.

Q But you did not?

A No.

Q They did not seem to be so bored with having nothing to do as this fellow?

A In moving along on a freight train through the country, it is much less boring than in the yard.

MR. LEWIS: Perhaps, Mr. Chairman, that is a psychologist's comment, for which this witness cannot be fully qualified.

THE CHAIRMAN: You asked him.

BY MR. LEWIS:

Q I think you said that as Road Foreman you had ridden some 50,000 miles?

A I believe that is what it is, in that neighbourhood.

Q During all that time you found very few alarms?

A Yes sir, outside of hot engine alarms.

Q In the tunnels?

A In the tunnels.

Q These diesel engines you were working on at that time I suppose were very new, were they?

A Yes, they were new engines. There may have been some that had miles before they came.

Q Even if they had miles I do not suppose there would have been many miles?

A No.

Q Is that not right?

A Yes.

THE CHAIRMAN: There was one alarm the witness mentioned.

MR. LEWIS: I think he said there was more than one; he mentioned one and suggested there were several I think. I forget the word he used.

THE WITNESS: I could not recall.

BY MR. LEWIS:



- Q You could not recall the number but there was more than one. You have had experience and you can tell me I suppose the likelihood of these alarms and defects appearing when an engine is very new, they would be much less than when it gets older; would that be right?
- A No, I would not say that was the case.
- Q You would not?
- A No. I am not an expert or can I even make a statement that would be considered, but I think it is possible they turn these units out sometimes like they do automobiles and they are not just as right as they are after they have some shop attention.
- Q I suppose that is --
- A Adjustments.
- Q There might be some kinks at first that have to be worked out and adjusted?
- A Adjustments.
- Q But when you go past that point would not you think that the engines as they grow older are likely to develop more of those defects and alarms than they do when they are young engines?
- A No, I hardly think so because as I understand they do not repair these locomotives, they replace the defective

parts. They do not work on them as a repair job; they take the unit or portion out and replace it.

Q When it wears down?

A Or is defective, whatever it may be.

Q I suppose that would depend on the degree of the defectiveness, as to whether they replaced it or made some repairs?

A In fact the unit stays new all its life because it is being replaced by new appurtenances or portions that might be required.

Q So what you are suggesting is that there ^{be} would/no time in the unit's life when it would have become worn so as to create more trouble; you say the moment it starts getting worn out it goes in and another one takes its place.

A The pieces are replaced; that is my understanding.

Q You trained steam engineers to become diesel engineers?

A Yes sir.

Q That was your main job as Road Foreman of Engines when the diesels came in; is that not right?

A Yes sir.

Q In that train did you not also train firemen-helpers?

A The fireman was instructed on the care

of the steam generator. We had classes in the shop and showed them on the road, demonstrated the operation.

Q When you were on the road are you suggesting you never took a fireman and showed him how to reset the protective devices?

A They would ask questions and look over the machine. We were out teaching the engineers that we were required to train, and the firemen got the benefit of being there.

Q And you never took the initiative of asking a fireman to watch while telling him things about the engine?

A No. We would answer him. Often a fireman would come back in the unit.

Q You never invited a fireman to come back into the unit?

A No.

Q You are quite sure of that?

A I do not recall inviting one back in there.

BY THE CHAIRMAN:

Q Back where?

A Into the unit, the body of the unit.

BY MR. LEWIS:

Q Or taking the initiative in giving him information? It was only answers to his questions you gave?

A Yes.

Q Your attention was completely rivetted on the engineer, you were not concerned with the helper at all?

A Yes. We didn't program them. The engineers were being kept track of and we watched them and taught them the various requirements.

Q Did you have firemen who were past engineers on the diesels? You must have had a good many of them, didn't you?

A I cannot recall whether we did have past engineers.

Q As firemen on your diesels?

A There was one that I can recall.

Q You are now Assistant Superintendent at Medicine Hat?

A Yes.

Q You would know how many firemen at Medicine Hat, or roughly what proportion are past engineers?

A The proportion?

Q Yes?

A I could not tell you offhand, no.

Q Would there be many?

A At the moment there would be quite a few.

Q And that has been the case throughout, has it not?

A Well, those men were set away up at that time. There was a lot of young men and I believe most of the written-up enginemen were running.

Q At that time?

A Yes.

Q The fireman had to write a mechanical examination, did he not?

A To become an engineer?

Q Yes.

A Yes.

Q And at that time did not the mechanical examination contain matter relating to the diesel?

A All the men that I wrote up as enginemen or assisted in writing up wrote on steam. They had no diesel.

Q But do you know whether when the diesels came in in your territory --

A That was after they had come in.

Q And the fireman had to write a mechanical examination, part of which dealt with the diesel engine? Is that not right?

A No, it ~~was~~ only a steam examination.

Q There was nothing about the diesel engine in the examination which the firemen had to write?

A Not in the examination that we used.

Q And so there was no reason for you to try to train the firemen at all in the diesel?

A That is right.

Q But you say he learned from the way you trained the engineer?

A Oh yes, they asked questions and would be back in the units and so on.

Q When you say "they" --

A The firemen.

Q And would it be a majority of them or a small number or a large number?

A Depending on their personal interest.

Q I understand that. I am asking you to remember whether your impression is that the majority of them showed that interest or --

A Yes.

Q Pardon?

A I would say the majority of them.

BY THE CHAIRMAN:

Q This training which you gave the engineer, was that right on the engine?

A Right on the engine.

Q Individually?

A Individually.

BY MR. LEWIS:

Q And following on this training question you said -- my notes are not very clear -- that if you had a passenger fireman who had written his "A" book then he could go on a yard engine with what training, that is, on a yard diesel engine with what training?

A With a road foreman for two or three days.

Q In the yard?

A In the yard.

Q What would he have learned as a passenger fireman in respect of being an engineer in a yard?

A He would observe the operation of the engine by the engineman.

Q Yes? Anything else?

A Well, he would know how it functioned from being on it.

Q He would not gain any experience in switching?

THE CHAIRMAN: You mean operating the engine.

BY MR. LEWIS:

Q Watching the engine operating, an engine attached to a passenger train, this fireman would not get any experience in the switching operations that are part of a yard operation?

A No, not while on that engine.

Q Not while on the passenger engine?

A Yes.

Q And he would not get any experience in exchanging signals, which the engineer must have in the yard, would he?

A Well, he would see the signals exchanged by being around the yards, the stations.

Q Being around when the train was being

marshalled or taken apart?

A When he was in the vicinity of it.

Q If he was in the vicinity of it?

A Yes.

Q And he would not have had any experience at all, would he, except this being around on occasions when the train is marshalled, with yard work and the requirements of the engineer in the yard?

A He would have his shop experience.

Q Before he became a passenger fireman?

A Yes.

Q He would have had that?

A Yes.

Q And in spite of all of that you think that just two or three days with the road foreman of engines in the yard would be sufficient to make him a yard engineer on a diesel?

A The average man, I would say he would get along all right with that. He would be given enough time there to get the feel of that engine and he would be quite all right

Q That is what I am after. You say he would be given enough time. I am trying to test your suggestion. I am

trying to test your suggestion whether two or three days is enough time.

A Well, maybe a few days more depending on the man, but I think two or three days would be enough for him to get the feel of the engine.

Q But would it be enough for him to learn the feel of the engine and switching and get the signals and^{all}/the other things?

A Well, he would know his signals. He would observe them and he would learn them from his rules.

Q He would have had to, I suppose. Part of his "A" examination would include signals. That is what you have in mind in part, Mr. Russell, is it?

A Yes.

Q Now, if this man has worked in the yard for about six months then you could make him a road freight engineer, taking him out for about a thousand miles? Did I understand you right?

A Yes.

Q And you said all over the subdivisions he is likely to work on?

A On each subdivision.

Q Would it be a thousand miles on each subdivision?

A Yes.

Q It is not a thousand miles altogether?

A No, no.

Q I beg your pardon, a thousand miles on each subdivision?

A On each subdivision.

Q And if he was likely to work in 8 or 9 or 10 subdivisions, which would not be unusual, would it?

A Ten might be; two or three might not be unusual.

Q Two or three?

A On a promotion district he would not likely be -- oh yes, it could run up to that.

Q Pardon?

A It could possibly run up to that.

Q It could run up to that. By that you mean six or eight? Is that right?

A Yes.

Q And that man, if that was the case, you would give him 6000 or 8000 miles of instruction?

A Yes.

Q A 1000 in each subdivision?

A Yes.

Q Because he would have to become fairly well acquainted with the road that he is going to run over? Is that it?

A Yes.

BY THE CHAIRMAN:

Q May I just understand that? Take this

passenger fireman you are going to introduce to yard service?

A Yes sir.

Q Has he run an engine at all?

A He possibly more than likely has moved one, handled one in his shop experience.

Q We are talking about the man that you take from passenger fireman and put him on the yard engine with the foreman.

A Yes.

Q I am asking you whether that fireman before you put him in that position, has to have any experience in actually running the engine himself?

A No. I think that he could operate that engine in the yard --

Q I am not asking that. I am asking whether or not he had to have that experience and you say no?

A No.

Q You take him then from being a fireman on a passenger locomotive and put him on the yard locomotive?

A Yard locomotive.

Q And at this time he has or has not written his "A" book?

A Oh yes.

Q He has written his "A" book?

A Yes.

Q So he might get his first actual operating experience as an engineman on this yard engine?

A Yes.

Q And this two or three days that you speak of, would the engine be actually engaged in the ordinary operations of the yard?

A Yes.

Q Under the supervision of the foreman?

A Yes sir.

Q You have said you would take a passenger fireman and do that with him. What about the freight fireman?

A There would be no freight fireman. The engineer would come right off a passenger run.

Q You are speaking about what you have done, are you?

A No sir.

Q You are speaking about what you would do?

A Supposition, yes.

Q Yes, I remember now. All right.

BY MR. LEWIS:

Q What you have just said to the chairman, as I understood it, is that the engineers for yard service and for freight service would, if the company's proposal were adopted,

come from the firemen working in
passenger service?

A Passenger service.

Q On diesels?

A Yes.

Q And you have had experience in training
engineers in the past, have you?

A Yes, I have my own experience. I was
written up as an engineman in 1945 and
I never did have any experience. I never
did, in other words, run an engine in
freight service until I was an engineer.

Q But you had been a fireman?

A I had been a fireman.

Q On and off for about twenty years?

A I had been on different jobs.

Q You started in 1925 and then you had
some years during the depression when
you worked very occasionally?

A That is right.

Q You had been on and off as a fireman
for twenty years before you were written
up as an engineer?

A That is right.

Q You had been a fireman, if I remember
correctly -- correct me if I am wrong --
you had been a fireman in the yard
during those twenty years and in
freight and in passenger service?

A Yes.

Q In all three services, on and off for twenty years and you had seen all the operations involved during those years?

A Yes.

Q Then you became an engineer in 1945?

A Yes.

Q Or at least you were written up as an engineer?

A Yes.

Q If firemen are taken off yard and freight road service as the railway suggests, then you would be left with the 449 passenger firemen shown in Exhibit 12. I don't know whether you were here or not, but Mr. Gossage filed an exhibit breaking down the firemen now in the employ of the C.P.R. and it shows 449 passenger, 1,690 freight and 788 yard firemen?

A Yes.

Q Then, I may inform you that in an addition to Exhibit 12 which Mr. Sinclair filed he showed that in 1956 there were 2,756 engineers. From your knowledge -- correct me if I am wrong -- that would be the total, passenger, freight and yard?

A I don't know.

Q Assume for the moment that it is, and I am sure I am right in stating that to you, the proposal you were discussing

yesterday as to training passenger firemen and how long would mean that out of the 449 passenger firemen you would have a pool to fill the vacancies occurring in the 2,756 engineers?

Is that right? Never mind about the numbers. Take my word for them because they are in the exhibit, but it is out of the firemen in the passenger service that you would have your pool to train engineers for all the three services?

A Yes.

Q Passenger, freight and yard; is that right?

A Yes.

Q If you did that and if you accept my numbers because they are on the exhibit, 449 passenger out of a total of 2,900 odd firemen and 2,756 engineers in 1956, if you did that, Mr. Russell, would you agree with me that passenger firemen would not be able to be firemen as long, for example, as you were?

A Probably not.

Q Probably not, and they certainly would not have any more than ^{one} experience in passenger alone?

A Passenger service.

Q Alone. That is a new one. I am not talking about one who is already employed

but a new one coming on?

A Yes.

Q And out of that you would have to train those engineers. He would have -- correct me if I am wrong -- a few days training and he would be in the yard and after six months in the yard you would have to give him several thousand, depending on circumstances, of miles on the road and then he would be equipped, you think, for a freight road engineer?

A Yes.

- Q Now, in your district or in whatever you call it, I don't know what the area is where you are assistant superintendent -- what would you call the area, division or subdivision?
- A Division.
- Q In your division would you tell me how many passenger firemen there are now?
- A Passenger firemen?
- Q Yes?
- A Maybe fifteen, in that neighbourhood.
- Q About fifteen?
- A Yes.
- Q There would be about fifteen passenger runs?
- A Men to cover the runs.
- Q About fifteen of them, right?
- A That could be.
- Q Well, that is your guess?
- A Yes.
- Q I appreciate you do not have the exact figures, Mr. Russell. Would you be able to estimate the number of engineers in freight in your district now?
- A In freight service?
- Q Yes, road freight service?
- A Twenty-two regular -- about twenty-five regular engineers.
- Q About twenty-five regularly assigned engineers?
- A Yes.
- Q Then, would there be some others who are on the engineers' spare board?

A Yes.

Q How many of them would you have roughly?

A Five, say.

Q That would be a total of 30?

A Yes.

Q How many yard engineers would you have in your division, can you make an intelligent guess on that?

A Seven.

Q And are there any on the spare board for that?

A No.

Q You did not include the seven in the previous twenty-five and five?

A No.

Q I just wanted to be sure about that. Now then, am I right in suggesting to you that at certain times of the year you have to find additional passenger engineers than the number you have now?

A Yes.

Q In the summer?

A In the summer months.

Q Around Christmas?

A No, there are no changes in the schedules at Christmas.

A Around Easter?

A No. The only schedule changes we get are regular summer trains.

Q Regular summer trains?

A Yes.

- Q Not only is that due to change in the schedule, Mr. Russell, it is also due to annual holiday arrangements for the men working, you have to have a larger pool?
- A Oh yes.
- Q For both reasons?
- A The spare men cover that.
- Q And those five men are enough to cover the holiday arrangements for the twenty-five on the road and seven in the yard?
- A No, it probably would not be quite sufficient.
- Q Before I go on with this question, Mr. Russell, you said there were, you thought, about fifteen passenger firemen?
- A Yes.
- Q Would that be about the number of passenger engineers too?
- A They could be close. They do not work on the same basis, engineers and firemen. They may have one more fireman than there are engineers.
- Q Usually it is so, that the firemen are one or two more than the engineers, isn't that right?
- A That is right.
- Q So that you would have close to fifteen if your guess at fifteen is right here? Close to fifteen engineers on the passenger service in your division at the present time?
- A Yes.
- Q And in the summer it could go what -- five, six, seven, eight more?

A Three.

Q You would add three engineers?

A Yes.

Q To give a total of around eighteen, right?

A Say eighteen.

Q And where would you find the additions for your passenger engineer pool and replacements for freight and yard engineer pool out of a total of about fifteen or maybe eighteen in the summer passenger firemen? How would that work out? Have you given it any thought?

A No, frankly I had not given it a thought.

Q In all of the answers which you gave about the removal of the fireman helpers in diesel freight and yard service, that it would have no effect on the efficiency of the operation of the railway, in all that you didn't take into account the training of engineers?

A Yes, I took into account the training of them, but I was not considering all the number of men and efficiency.

Q You were not considering that?

A No.

Q You say you were not considering that question, the question I have just been dealing with, at all?

A No, not in that manner. I had not figured out.

Q In what manner had you considered the question of a pool for engineers?

A We have numbers of men and from bringing

them along without figuring it appeared that there would be men to bring from that service.

Q From what service?

A Passenger service.

Q Well suppose -- and I am putting to you and I just going to put it this once -- supposing the firemen that are now on the yard and freight service were let go this morning -- Mr. Chairman, I want to assure my friend that I know that will not be the railway's policy or that will not be the policy they recommend, I don't know what it will be but I am not trying to anticipate that -- supposing all the firemen on freight and yard diesel service were let go tomorrow and you were just left with your passenger firemen, did you give any consideration as to where you would get your engineers for all the services? If you did not, just say so. I am asking you whether you took it into account?

MR. SINCLAIR: Let him answer, Mr. Lewis. You put a question and he starts to think it out and give you an answer, and before he starts to answer you say "Well, if you didn't do so, just say so."

MR. LEWIS: That is right.

THE CHAIRMAN: There have been interruptions of witnesses, I think, on both sides of the house. That is what I am complaining about a little bit, I think. We want to read this record and we want the questions to be clear and the answers to be clear.

BY THE CHAIRMAN:

Q Do you remember the question, Mr. Russell?

A It would be clearer if I heard it again.

THE CHAIRMAN: Would you read the question, Mr. Reporter?

THE REPORTER (Reads):

"Q. Well, suppose -- and I putting to you and I am just going to put it this once -- supposing the firemen that are now in yard and freight service were let go this morning -- supposing all the firemen on freight and yard diesel service were let go tomorrow and you were just left with your passenger firemen, did you give any consideration as to where you would get your engineers for all the services? If you did not, just say so. I am asking you whether you took it into account?"

THE WITNESS: The number of men there would be, of course -- these men are not going to go --

BY MR. SINCLAIR:

Q Speak up, Mr. Russell.

A The number of men there would be available there and these men are not going to disappear like that, I think they would be sufficient to cover the jobs.

BY MR. LEWIS:

Q When you say "the number of men" you are saying?

A That we would have available.

Q Not only from passenger but also from freight and yard service, that is what you are saying?

A To cover the jobs it would be required to fill.

Q But I am asking you when you say they are available, Mr. Russell, from the firemen in all three branches, freight, passenger and yard, or merely the firemen on passenger?

A The firemen on passenger.

Q The firemen on passenger, you think, would be enough to provide the engineers in all three services?

A I think it would.

Q And you gave that question consideration, did you, before giving evidence here today?

A I didn't do any actual figuring on definite numbers of men.

Q Did you give it any consideration at all, this question of a pool for engineers? Did you or did you not give it any consideration before you gave evidence here?

A Yes, I gave it consideration, those men and how they would be made available for enginemen.

Q How those men would be made available for enginemen?

A The firemen would be trained.

Q Mr. Russell, it may be my fault. I appreciate

that you gave consideration to the question as to how and for how long you would train the passenger fireman to become a yard and road engineer. You did that?

A Yes.

Q That is clear. Now, I am asking you, I have tried to ask you in two or three ways -- whether you gave any consideration to the question as to whether the pool of passenger firemen would be sufficient to provide the company or your division with the number of engineers that you would require in passenger, freight and yard. Did you give that question any consideration?

A Yes, but I didn't figure it out on an exact figure or try to get it down to any exact figure, but it appeared to me that there would be enough from that service.

Q Now then, Exhibit 123, your trip observations, Mr. Russell?

A Yes.

THE CHAIRMAN: Shall we break here, Mr. Lewis?

MR. LEWIS: All right, sir.

--- Recess.

G. Russell

BY MR. LEWIS:

Q I just have a very few questions and they are brief ones, Mr. Russell. You said something regarding page 2 of the exhibit this morning that I did not quite follow. It was in connection with the fireman leaving the cab and going to the station office to pick up the orders and returning to the cab and you said something about they did not have too much time. That is what I took down in my notes.

A Oh, no sir. At Gleichen the engine stops back of the station and the fireman walked to the station and got his orders and came back.

Q And you said they did not have too much time?

A That was Bassano.

BY THE CHAIRMAN:

Q Where the fireman helped with the switching?

A That is right.

BY MR. LEWIS:

Q Where the fireman helped with the switching?

A Yes.

Q What did you mean when you said they did not have too much time? Did they have to clear the track?

A There was a passenger train coming behind them and in order to expedite this work here he

gave him a hand to do it so they could leave.

Q Leave faster?

A Yes.

Q And on page three the signals were given at one point to the fireman? Is that right?

A Yes.

Q And you said it was not necessary. Why do you think they did so?

A It was easier for him to do it the way he did it.

Q In what way easier? What was it that made it easier?

A He was on the track side on a level ballasted track. If he had gone on the other side he would have to step out a few feet in order to do it.

Q He would have to step out farther away?

A Yes.

Q In order to be seen by the engineer?

A By the engineer.

Q He had room to step out?

A Oh yes, it was prairie.

Q On page 7 of the exhibit, with regard to this ground relay, I think it was --

A Yes sir.

Q You said that the fireman reset the button which you say is behind the engineer -- up above, is it, in the cab?

G.Russell

A No, it is about on a level with his head.

Q But he could not reach it without standing up?

A He would have to stand up.

Q How long after the resetting of the button did the engine not load?

A Possibly five minutes, a little longer than it took the fireman to check the fuses.

Q He checked them to make sure they were all right?

A Yes, and it was not too long after he had checked the fuses that she started loading again.

Q And if something had been wrong with one of the fuses I suppose there was a supply of fuses to replace the defective one, was there?

A I didn't see them but I think there would be.

Q And that might have been the reason, a defective fuse might have been the reason for the trouble?

A No, I was standing right beside him and interested in him changing these fuses and they all went back okay --

Q I am sorry to interrupt you but you misunderstood me. I did not mean to say that you had not told us the truth about that. I understand that this time the fuses were not the cause. I am asking you whether there is such a thing as a defective fuse causing this ground relay?

A No, I would say it would not be a fuse.

Q It would not be a fuse that could cause that?

G. Russell

A That would cause that ground relay.

Q Then is it likely that the engineer or the fireman worked what I am told is called the isolation switch on this type of engine and that that caused it to load, or was there no such action?

A I didn't see any such action.

BY THE CHAIRMAN:

Q Do you know what an isolation switch is?

A Yes sir.

BY MR. LEWIS:

Q And when you say you did not see it, could it have happened without your seeing it or were you watching carefully all the time?

A It could have happened without my seeing it. He was going along with one unit and the leading unit not loading and to all intents and purposes for no good reason it started to load again.

BY THE CHAIRMAN:

Q Which was the unit that did not load?

A The leading one.

BY MR. LEWIS:

Q I assumed that because you said the engineman could reach it by standing up. If this thing had happened in the trailing unit --

A The trailing unit would have stayed off the line until he stopped some place.

Q And he could have done that because I think

G. Russell

you informed us that with the tonnage of this particular train you had excessive power?

A Yes.

Q You could have taken this tonnage with one unit alone?

A Yes.

Q Over the entire trip?

A No -- the trip to Bassano, yes.

Q From Alyth to Bassano?

A Yes.

Q But if you had had a heavier train this thing might have happened in the trailing unit?

Is that right?

A Yes.

Q And in that case either the engineer would have had to stop or the fireman would have had to go back to the trailing unit?

A That is right.

Q Is that right?

A A heavier train and could not handle it, he would have to set a portion of it off or stop and reset it.

Q He would have to set a portion of it off.

You mean a portion of the train off?

A The train.

Q Page 8 has to do with the spotting or placing of cars at an elevator. At the time of the year when you made this trip, February 20, I suppose the grain elevator was closed?

G. Russell

- A This was not spotting. The elevator track was empty. It was simply a means of getting the car that was defective close to the caboose to make the repair.
- Q I beg your pardon. I did not re-read it. I wanted to ask you another question about that. Was the elevator closed at that time?
- A Closed, yes.
- Q At that time of the year it would be closed?
- A Oh no, they would be doing business but at that time of night there was no one around.
- Q And was this platform up?
- A I couldn't tell you.
- Q From your experience would you know whether this platform we discussed yesterday -- you were here when it was discussed?
- A Yes.
- Q Would you know whether this elevator platform is usually up?
- A Generally it is up.
- Q Generally up against the elevator?
- A When they are not in use, yes.
- Q When the platform is not in use it is generally up?
- A Generally up.
- Q Can you put it up or does the man inside the elevator --
- A Well, anyone could put it up but they put it

G.Russell

up when they are through using it as a rule.

Q And in the heavy grain movement season would the platform be up when they are not actually working at it?

A Generally when I have observed them they have been up any place.

BY THE CHAIRMAN:

Q One platform for each door, is there?

A Yes, there is just one platform at each elevator actually. They only have the one door.

BY MR. LEWIS:

Q This question of draining the reservoirs --

A Yes.

Q Are my instructions correct, Mr. Russell, that in the winter time there is a danger of the water that might collect or the moisture that might collect in the reservoir freezing?

A Yes, it could freeze.

Q And it is very important that it not freeze for the braking of the train? Is that not right?

A Well, the freezing of it would not in itself interfere with it.

Q What would then?

A If it was left a prolonged time so that water could get into the brake system.

Q And there is always a danger of that?

A Yes.

G. Russell

Q In the wintertime? Is that right?

A Yes.

Q So that draining the reservoir at reasonably frequent intervals is a pretty important precaution in the winter months? Is that not right?

A That is right.

BY THE CHAIRMAN:

Q What do you mean by "a prolonged time"?

A Sufficient time, sir, for condensation to collect to the quantity that could go over into the pipes from it.

Q Well, yes, but I am asking you if you have any idea how long that would take?

A No, I have not actually.

BY MR. LEWIS:

Q Just one final little question, Mr. Russell, about the fireman -- I forget which page number it is -- who went to the trailing unit to eat his lunch.

A Yes sir.

Q Why would he have done that? He had a seat?

A I haven't any idea why he went there.

Q It was suggested to me that perhaps he was being polite to you and since you were standing offered you a seat?

A No.

Q I am sorry he didn't. Thank you.

G.Russell

MR.SINCLAIR: I just have one question, Mr.Chairman, with your permission, in re-examination.

BY MR. SINCLAIR:

Q Taking Exhibits 124A and 124B, one is a letter from Mr. Mattingley, the vice president, to the general chairman, dated March 17, 1948, and the other is Mr.Druce's letter to the local chairman on March 20, 1948, which my friend read into the record this afternoon. Now, this letter would come to you, would it, as the local chairman of lodge 635, or who would get the mail?

A The secretary -- it may have come direct or to the secretary.

Q What is the usual procedure in the lodge when you get a letter like this?

A The letter is read to the lodge for their action.

Q And who is the lodge?

A The members.

Q And would the secretary read the letter out loud?

A Yes.

Q And then what would happen?

A It would be debated and all information developed according to the letter, what it required.

Q And after that what would happen?

A Whoever was responsible for it would be instructed to answer it accordingly.

G.Russell

MR. SINCLAIR: I was wondering, Mr.Chairman, whether my friend's clients could look up the records of lodge 635 and see what was recorded when this matter was dealt with. That might be simpler than anything else.

MR. LEWIS: I will be very glad to. I hope they have the minute book. May I say, Mr.Chairman, that I was going to do that in re-examination.

MR. SINCLAIR: Re-examination?

MR. LEWIS: Or rather arising out of what my friend said I was going to ask permission to ask a question about this general suggestion of the letter going to the secretary and being read to the lodge. I want to state now that my instructions are that is not what happened with that. That went to Mr.Russell.

THE CHAIRMAN: Go ahead. Are you finished?

MR. SINCLAIR: No, I am not.

BY MR. SINCLAIR:

Q Letters asking about general lodge business in regard to wage movements and changes in rules such as requiring two men on diesels or assignment of firemen to diesels, would those matters be brought before the lodge in assembly?

A All the correspondence or information would be given to them.

Q Would be given to the lodge?

G. Russell

A To the members, yes.

Q And would a request in a matter of a major demand like this be discussed just at one meeting or more than one meeting? I notice that this letter of Mr. Druce is dated March 20 and Exhibit 124 is dated April 18. Do you know what would account for about a month's delay in answering?

A I would not -- I cannot recall -- possibly gathering the data.

MR. LEWIS: May I ask a question arising out of that, Mr. Chairman?

BY MR. LEWIS:

Q Mr. Russell, you are not suggesting that particular letter from Mr. Druce did not come to you and was not addressed to you directly?

A It may have. Sometimes it came to the secretary and sometimes it would come direct.

Q From the general chairman, but you would not know whether this did not reach you directly?

A No.

Q And were you suggesting that you remembered that this particular letter was discussed at the lodge meeting?

A No. I don't recall.

Q You are suggesting what the general practice

G.Russell

would be.

A The practice was to give reports to the membership in a regular lodge meeting.

Q And when you were local chairman who was the lodge secretary? Who was the lodge secretary at that time in March and April, 1948?

A I believe it was Mr. Marshall.

Q You think it was Mr. Marshall?

A W.Marshall.

Q And would he be the recording secretary or did you have more than one secretary?

A Recording secretary.

Q So he was the man who took and kept the minutes?

A Yes.

THE CHAIRMAN: That is all, thank you.

Next witness.

JAMES FREDERICK CRATE, Sworn

BY MR. SINCLAIR:

Q Mr. Crate, you are now acting superintendent of the Sudbury division of the Canadian Pacific Railway?

A That is right.

Q You joined the service of the Canadian Pacific on May 9, 1923 as a labourer in the ice house at Smiths Falls, Ontario?

A That is right.

Q And after working there during the summer you went back to school for one more year and left school in May, 1924, and joined the service permanently of the Canadian Pacific?

A That is right.

Q And your first job was call boy at Smiths Falls?

A Right.

Q You were call boy from May, 1924 to April, 1926, and during that period you ran a number of times as fireman in the yards at Smiths Falls?

A That is correct.

Q In April, 1926, you became a shop labourer at Smiths Falls and after five months as a shop labourer you were set up as a spare fireman. That is in September, 1926, and from September, 1926 until November, 1931

J. F. Crate

you were a spare fireman in freight yard and passenger service on the Smiths Falls division of the Canadian Pacific?

A That is correct.

Q In 1931 on account of the falling off of work you could not hold a position on the spare list and went back as an engine cleaner at Smiths Falls, a wiper.

A Correct.

Q In May, 1932, other people falling back from the firemen's roster pushed you out of that classification and you returned in May, 1932, to be a labourer in the ice house at Smiths Falls?

A The firemen's roster had nothing to do with it. It was from the lay-off of shop employees.

Q The lay-off of shop employees. So you were working as an ice house labourer from May, 1932 to May 1937 and then in May, 1937 you again for a few months were able to hold work as a spare fireman on the Smiths Falls division.

A Correct.

Q And you did so until the fall of 1937 when again work fell off and you returned to being an ice house labourer at Smiths Falls and did so until the fall of 1939. From the fall of 1939 until January of 1942 you ran as a spare fireman in road

J. F. Crate

freight, yard service and in passenger service
and part of that time as a regular fireman on road
freight service in the Smiths Falls division?

A Correct.

Q January 1942 to November of 1946, that is a period of about four years, you ran as a regular fireman on the road freight service and as a spare engineer in road freight and yard service at Smiths Falls and on the Winchester Subdivision of the Smiths Falls division?

A What date was that?

Q January 1942 to November 1946?

A I was used as an engineer. On the Smith Falls Division they had what they called a pooled freight list and a spare list, and when you were first promoted from a fireman to an engineman you were on the spare list. When they ran out of engineers they would call a senior fireman. During that period I was used as an engineman considerable.

Q And the Winchester Subdivision is from Montreal to Smiths Falls?

A Yes, from Ballantyne actually to Smiths Falls.

Q Which is just outside of Montreal?

A Yes.

Q And from November 1946 to August 1950 you were on the spare engineers' list running in road freight and yard service and passenger service on the Smiths Falls Division?

A November 1946 -- could be 1947, some months in 1947. I am not just positive what month I was set up in.

Q So we might make that date 1947 instead of

1946?

A Correct.

Q But from 1950, August 1950, you stood as a regular engineer on road freight service on the Winchester Subdivision?

A Correct.

Q And when you were an engineer in some of this period, Mr. Crate, did you run as an engineer on the commuter passenger trains running from Rigaud into Montreal?

A Yes, I did.

Q For long?

A No, just spare trips.

Q And in April of 1951 and through October 1951 you were promoted or appointed Division Rules Instructor for the Smiths Falls Division?

A That is correct.

Q And then in October of 1951 and for a period of three and a half years thereafter you were the District Rules Instructor for the Algoma District of the Canadian Pacific?

A That is correct.

MR. LEWIS: I am sorry, that was from October 1951 --

MR. SINCLAIR: Through February 1955, a period of some three and a half years, District Rules Instructor, Algoma District.

BY MR. SINCLAIR:

Q And in February 1955 you were promoted to

Assistant Superintendent of the Sudbury
Division with headquarters at Sudbury, Ontario?

A That is correct.

Q And in January of this year and since you have
been the Acting Superintendent of the Sudbury
Division of the company?

A That is correct.

Q You are replacing the Superintendent who is
on leave on account of illness, is that correct?

A That is correct.

Q Now, one other background of your career, Mr.
Crate. For a good number of years I understand
you were the Recording Secretary of the
Firemen's Brotherhood at Smiths Falls?

A That is right.

Q And later in your career you were the legis-
lative representative of the Locomotive Engineers,
the B. of L.E.?

A Correct.

Q And later you were the local chairman of the
Brotherhood of Locomotive Engineers?

A During the same period.

Q Yes, during the same period you were legis-
lative representative?

A Yes.

MR. LEWIS: What was that?

MR. SINCLAIR: During the same period
he was legislative representative for the Engineers
he was the local chairman of the Brotherhood.

BY MR. SINCLAIR:

Q Correct?

A That is correct.

Q Would you please tell the Commission, Mr. Crate, what experience you have had of hand-firing steam locomotives with Canadian Pacific?

A When I started on the main line D-10 engines were assigned, engines with regular crews. I was on the spare list, of course. The spare men got all transfer engines which included P-1's, P-2's, G-3's and G-2's. Engines out of Angus and engines going to Angus usually passed over the Winchester Subdivision.

Q "Angus" means to the shops in Montreal?

A The general shops.

Q What types were they?

A P-1's, P-2's --

Q G-2's?

A And G-3's.

Q Any N-3's or N-2's?

A N-3's and N-2's.

BY MR. LEWIS:

Q Both 3's and 2's?

A N-3's and N-2's, correct; and the 400's, I was trying to think what they were.

BY MR. SINCLAIR:

Q D-4's?

A That is right, D-4's and D-5's.

Q And you hand-fired all these various types

of engines?

A That is correct.

Q And the G-3, that is a 2300?

A That is correct.

Q When you had them were they hand-fired?

A That is correct.

Q Can you recollect -- and this is a point I would like to clear up, Mr. Russell was trying to recall -- what is your recollection of where the fireman sat on a G-3 hand-fired engine?

A In front of the fireman is my recollection of that.

Q I asked you where the fireman sat?

A Pardon me, I thought you were referring to the trainman. The fireman sat behind the trainman as near as I can recollect.

Q What about the other classes of power, hand-fired engines?

A P-1's hand-fired, the fireman sat behind the ^{trainman} ~~engineer~~, and D-10's --

Q D-4's?

A D-4's, D-5's --

Q And on N-2's and N-3's?

A On N-2's and N-3's and G-2's, 2200's, 2500's, 2600's.

Q In all those cases the fireman sat where?

A Behind the trainman.

THE CHAIRMAN: That only leaves

P-2's.

BY MR. SINCLAIR:

Q What about P-2's? Did you have hand-fired P-2's?

A I had one of those one summer on a work train, 5304 was the engine, I think, hand-fired, and my recollection is the trainman sat in front of the fireman.

Q So that in all the classes that you fired I take it, Mr. Crate, the fireman was sitting behind the trainman in freight service on these types of engines?

A There could be a little doubt on the 2300. That is the G-3. I just recollect firing them once or twice when they were being transferred to or from the shop, but the others I am quite positive -- well, I am positive about the P-2. I am not sure that I sat behind the trainman.

Q You are positive with respect to the P-2?

A No, not positive about the P-2 or G-3, but positive about the rest of them.

HOW. MR. MARTINEAU: Not positive about the --

MR. SINCLAIR: P-2 or G-3.

THE WITNESS: But my recollection is as of that time which is 30 some years ago and is not so good.

BY MR. SINCLAIR:

Q You are positive about the others?

A Positive about the others.

- Q Now, were the G-3's and P-2's difficult engines to hand-fire or were they not?
- A Very much so, due to consumption of fuel and the size of the fire box.
- Q Were they or were they not the first class to which stokers were applied?
- A P-2's to my recollection were the first class that stokers were applied to.
- Q Well now, take for instance the P-2 or G-3, when you were hand-firing them about how much coal would you be required to throw into them over a division for freight service?
- A Twelve, thirteen, fourteen tons of coal, depending on the train and weather conditions.
- Q And in passenger service?
- MR. LEWIS: Was that P-2?
- MR. SINCLAIR: P-2 and G-3.
- BY MR. SINCLAIR:
- Q In passenger service did you ever hand-fire this G-3 in passenger service?
- A No, I never hand-fired them in passenger service work, although I was quite familiar with the operation of them in passenger service in connection with organization work. We had them on 21 and 22.
- Q 21 and 22 are trains 21 and 22?
- A Trains 21 and 22, passenger trains from Montreal to Chicago, they run over our division.
- Q Montreal - Toronto - Chicago, we like to call it.

- A Well, that is where they run, and at that time they had them on 21 and 22 hand-fired and the firemen complained very bitterly about the amount of coal they consumed and the time they spent on the deck. I well recall that. The men were quite justified in their complaints.
- Q Well, in your own experience, did you ever run, for instance, a D-10 on the Winchester Subdivision on freight service hand-fired?
- A I hand-fired them, yes.
- Q Now, how many tons would you put into that across the division?
- A Again that depends on the tonnage of the train and the weather conditions. I have seen our D-10 not go over the subdivision, have to set the ^{train}~~engine~~ off, the tender would be stripped of coal.
- Q How much does the tender hold?
- A Twelve tons.
- Q G-2's, N-2's and N-3's, what about them for hand-firing?
- A I have seen the same thing happen.
- Q Wouldn't go over the subdivision?
- A That is right.
- Q How many miles is that subdivision?
- A Smiths Falls to Ballantyne is 122 or where we used to run into Outremont 128.
- Q Miles?
- A Miles.
- Q Now, taking these various trains that you

talk about, let me ask you this question:
Passenger trains 37 and 38 or 35 and 36 --
they were passenger trains between Montreal
and Toronto were they not?

A That is correct.

Q Did you ever work as a fireman on those
passenger trains?

A I had a few trips on 37 and 38 as a spare
fireman. I fired 35 and 36 regularly for
some time -- at least from one change of time-
table to another.

Q And what was your ~~ex~~perience on ~~the~~se trips?

THE CHAIRMAN: What kind of loco-
motive?

BY MR. SINCLAIR:

Q What kind of locomotive?

A G-2.

Q What was your experience on these trips as
to firing?

A 35 and 36 was a very strenuous job due to
the high pressure engines that were on them.
They consumed considerable coal. I would
say between 7 and 8 ton was a minimum from
Montreal to Smiths Falls.

Q How long would you take with that type of
engine on that run?

A Three hours and thirty minutes or thirty-
five minutes.

Q And in that period you would shovel that
much coal?

A That is right.

Q Hand-fired?

A That is right. On that type of engine.

Perhaps there might be other gentlemen who have fired the same class of engine with low pressure. But this job they had high pressure engines. Since that time they have put stokers on a few of them.

Q Well now, over all of these trains, freight first, freight service hand-firing, these various types of engines pulling freight trains, what would be the range of time taking them from the best trip to, say, a bad trip -- a good trip to a bad trip -- what would the length of the time be that you would be on the deck, either firing or looking after your fire or other work you had to do?

A Do you want an average, Mr. Sinclair?

Q Well, give me -- no, give me an average if you would like to.

A Seventy per cent.

Q And in passenger service?

A Well, passenger service varies. On 35 and 36 I would say I was on the deck 60 per cent of the time.

Q And the other type?

A I would have to say 60. 29 and 30, when there were hand-fired engines on there, the time was slower and I would be on the deck

perhaps 40 per cent of the time.

Q Now, Mr. Crate, have you ever been a fireman on stoker-fired power?

A Yes.

Q Much or little?

A Yes, considerable. When I came back after the depression we had numerous stoker engines on our division. They brought the 2800 from the west.

Q That is the Hudson class locomotive?

A The H-1.

Q It is a passenger engine?

A Yes, 2800 to 2819 were assigned between Toronto and Montreal so I had considerable experience on those engines.

Q K-1 -- 3100 and 3101?

A I had considerable experience on those. I fired them steady.

Q That is the two types that Canadian Pacific had. They had only two of those and they were assigned from Montreal to Toronto?

A Yes, on 21 and 22.

Q Any other types of stoker that you were on in freight service? Those are passenger runs?

A I fired the second duplex stoker that was ever turned out for the Canadian Pacific on a 5300.

Q That is a P-2?

A That is a P-2, that is right. That was a duplex standard stoker. n the 2800. and simplex stokers on the P-1's, 2400.

Q Now, in your experience as a stoker fireman, what would you say about your job? How much time did you spend on the deck and what would you do?

A There again it varies, not so much as to the weather conditions or the train conditions as with the coal conditions. Take, if you have got a good tender load of coal you are on the deck very little.

Q What would "very little" be?

A Well, not any more than to get down for two or three minutes at a time to see how your fire was. You would open the door and look at it watching to see that it was burning a level fire. On another occasion you would get a tender load of wet coal, usually in the severe weather, and when this wet coal filled with frost would hit the jet plate it would stick and cause carbon which would plug up the jets. Therefore, it was necessary to take the tool which was supplied on the engine to clean the jet out and after you got the jets cleaned out and she would almost form as fast as you could clean the jets out therefore there is another tool on there and stay down there and keep the jet clear. Sometimes you would be there a considerable length of time.

Q Well, how much?

A Well, I can recall one case were I was running 21 with a very good fireman and he was on the deck from Montreal west to Smiths Falls but that is rare. I never actually had that happen to myself as a fireman although I was running this train when it did happen. There is no man can sit on a seat on a stoker engine type over the whole division. If he can he is very fortunate. He is just guessing at his work.

Another thing I have run into on stokers is that you have got to be constantly -- I should not say constantly because that is 100 per cent but you have got to keep a good lookout on the flow of coal. I think we all understand that the majority of coals on a stoker-fired engine is burned before it ^{hits} ~~fits~~ the grates. So therefore if you are not watching the flow of coal and a piece of wood or metal or slate gets into the worm and the worm sticks, the first thing you know she is back on steam pressure considerable.

Q Then what would you have to do?

A Well, you would have to try to get it back as fast as you can.

Q I mean --

A Pardon me, I believe I understand what you mean.

Then it would be necessary for you in the majority of cases to go back into **the tender** and reverse the engine and try to get this obstruction out of the worm.

Q Then, if you did that how would your fire be?

A Well, she is very apt to be off 50 or 60 pounds, that is for sure.

Q Then, how would you bring her up, would the stoker bring her up?

A The stoker should bring her up.

Q Have you ever had to hand-fire with the stoker?

A I have through failure with the stoker.

Q Have you ever had to supplement a stoker on an H-1, that is 2800 class in freight service? Have you ever hand-fired a stoker?

A I did on 905 one night from Chesterville to Smiths Falls with the assistance of the trainman.

Q Are you saying you were both down there shovelling?

A She would never have got there, I don't believe, if I had to do it.

Q Then, over-all based on your experience as a stoker fireman what would you say

would be a fair figure of the amount of time a fireman on a stoker-fired engine would be on the deck?

A Well, taking the good trips in with the bad I would say 15 per cent of the time.

Q 15 per cent?

A Correct.

Q Now, would that include passenger service?

A That is right.

Q Well, in freight service -- give them to me separately, freight service and passenger service, freight service first?

A You mean for all types of stoker-fired engines?

Q In freight service that you have observed and been in.

A All types, not just the H-1's?

Q No, everything.

A Well, I would have to raise it a little for that because your P-1 engines are a difficult engine to fire with a stoker, they have a small fire box and they have to be continually watched and again you have to shake them very frequently. I would say 25 per cent on freight.

Q 25 per cent on freight?

A Yes.

Q Now, when you were running as an engineer did you run all these various classes

of engines that you have spoken of
in your firing experience?

A Yes, I did.

Q All of them?

A All of them.

Q Now, when you were running as a fireman
in freight service what did you want and
rely on your fireman for?

A When I was running in freight?

Q Yes.

A As an engineer?

Q Yes.

A The main thing was steam pressure.

Q What else?

A And an adequate supply of water in the
boiler.

Q What else, if anything?

A Well, I would expect him to call signals
when he was available.

Q Would that take up all the time? You
told the Commission you would look to
him to do that. Would that take all his
time?

A It took up nearly all his time as it
did mine when I was firing.

Q When you were a fireman what did you
consider your job and what did the
engineers expect off you?

A For a considerable time, I would say
for a period of a year, my job was

chiefly learning to be an expert fireman, that is, maintaining steam and trying to do it the easy way. When I say the "easy way" I mean saving your back as much as possible and, of course, you had a lot of good teachers at that time, old experienced engineers and they realized what you were up against but as time went on they kept telling me there was more to firing than just keeping the engine hot.

Q What else was there?

A With regard to knowing the rights of superior trains which we all read the rule book on when we started but which only comes through experience and also the importance of knowing the position of all fixed signals et cetera.

Q When you talk about a fixed signal what kind of signal as a fireman were you expected to look for?

A Well, at that time we had Bedell, Finch, Debeaujean and Ballantyne, we had four junction points on our subdivision and they were very important. Train order signals are very important and those were the things and also block signals if it was possible to observe them.

Q When you say they were important are those junction signals ones that you as a fireman would always see or would you not?

A Junction signals, yes.

Q You always made it a point to see them?

A Yes, or you realized exactly what might happen. You always tried to be in a position whether you were on the deck or not to see how the approach signal was or the home signal to the junction.

Q What about a train order signal?

A The same thing. I won't say that you did that when I first started because if I did I would only be telling a falsehood but as I said you were primarily interested in

maintaining steam pressure.

Q Well now, what about block signals, when they would be called what would the fireman do, what would you do?

A Block signals on our subdivision -- if you were in a position to call them you called them. If you were not in a position to call them you accepted the acknowledgement between the engine-man and the trainman.

Q And would you say anything at all?

A "Clear block".

Q You would say "clear block"?

A Yes.

Q And in saying that would you or would you not have seen the signal?

A Not seen it.

Q Was that unusual in your case or did you also have that experience when running as an engineer?

A The very same experience.

Q Your experience was that it went on with the firemen when you were an engineman?

A That is right.

THE CHAIRMAN: I think we will adjourn, Mr. Sinclair.

--- At 4.00 p.m. the Commission adjourned until 10.30 a.m. Friday, April 5, 1957.

Amended
July

ROYAL COMMISSION ON EMPLOYMENT OF FIREMEN
ON DIESEL LOCOMOTIVES IN FREIGHT AND YARD
SERVICE ON THE CANADIAN PACIFIC RAILWAY

23

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ROYAL COMMISSION ON EMPLOYMENT OF
FIREMEN ON DIESEL LOCOMOTIVES IN
FREIGHT AND YARD SERVICE ON THE
CANADIAN PACIFIC RAILWAY

Proceedings of public
hearing held at Ottawa,
Ontario, Friday, April
5, 1957

PRESENT:

Hon. R.L. Kellock,	Chairman
Hon. C.C. McLaurin,	Member
Hon. Jean Martineau,	Member
Douglas M. Fraser,	Secretary
A.R. Winship,	Asst. Secretary

APPEARANCES:

D.W. Mundell, Q.C. C.J.A. Hughes, Q.C.	Representing the Commission
I.D. Sinclair, Allan Findlay	Representing the Canadian Pacific Railway Company
David Lewis,	Representing the Brotherhood of Locomotive Firemen and Enginemen

Friday

April 5, 1957.

23rd DAY

MORNING SESSION

--- The Commission resumed at 10.30 a.m.

J. F. CRATE, recalled

BY MR. SINCLAIR:

- Q. Mr. Crate, just at adjournment you were telling the Commission of your experience on hand-fired and stoker-fired power. If I recollect your evidence, you said that on hand-fired power, as a fireman or as an engineman, the fireman was relied on to produce steam; is that correct?
- A. That is correct, and maintain an adequate supply of water and have the fire in proper ^{condition} ~~position~~ en route.
- Q. Then I think you went on to say that when he could he maintained a look-out; is that correct?
- A. That is correct.
- Q. And he would be looking for what?
- A. He would be looking for fixed signals.
- Q. Then you explained how he was busy; you dealt with block signals and the acknowledgment of them. Taking when you were a fireman on hand-fired power or stoker-fired power what was the trainman relied on for, Mr. Crate, the head trainman?
- A. His chief job was maintaining a sharp look-out. He was in position to do so.

The engineer frequently would consult him as to superior trains.

Q. Would he have any other duty beside maintaining a look-cut?

A. Train inspection, running inspection.

Q. That would be when you were running between terminals. What would be his duties, if any, when you stopped?

A. Well, if we stopped for water the man assisted the balance of the crew in a standing train inspection; if it was necessary to set out or pick up a car, he performed the switching with the assistance of other members of the train crew.

Q. Now, Mr. Crate, what is your experience on diesel power? Were you ever a fireman on diesel power in the yards or on the road?

A. No.

Q. Did you ever run as an engineer on diesel power in the yards?

A. Yes, I have.

Q. For how long?

A. For a period I would say of approximately three to four months.

Q. Where?

A. Smiths Falls yard.

Q. When you were running as an engineman on diesel power in the Smiths Falls yard, what if anything would you rely on the fireman for on the diesel?

A. To that I can say, nothing.

Q. What would he do, Mr. Crate, when he was the yard diesel with you?

A. Well, he did everything to keep himself busy. When we stopped frequently he would go out and inspect the unit on the ground and blow out the reservoirs. He would keep the cab in a tidy condition. He would clean the windows.

Q. Did you ever run on diesel power on the road as an engineer?

A. Yes, I have.

Q. On the road, Mr. Crate, did you have much experience in running diesels?

A. My experience on diesel road locomotives is very limited.

Q. About how many trips did you make?

A. Approximately 25 trips.

Q. Is that round trips?

A. Round trips.

Q. Those trips, were they on freight or passenger service?

A. In freight service.

Q. On those 25 round trips, which would be

about what, 100 miles each, or 125 miles?

A. 128 miles.

Q. 128 miles each way, so that would be 50 times 128, something over 50,000 miles.

THE CHAIRMAN: This was where?

BY MR. SINCLAIR:

Q. Where was that?

A. Between Smiths Falls and St. Luc yard. Pardon me, the mileage would be a little less, 125 miles.

Q. So it would be something around 50,000 miles.

MR. LEWIS: Something over 6,000 miles.

MR. SINCLAIR: Between 5,000 and 6,000 miles.

THE WITNESS: Yes.

MR. LEWIS: You are still wrong, it is over 6,000 miles.

BY MR. SINCLAIR:

Q. Something over 6,000 miles, is that right?

A. That is right.

Q. In the time when you were running in freight service what would you rely on the fireman for?

A. At that time the fireman had a duty to

perform as far as diesel locomotives was concerned.

Q. What was it?

A. He had a chart to fill out in connection with lube oil readings and booster pressure.

Q. What kind of pressure?

A. Booster pressure, fuel oil pressure. As I said, I had very little experience. I do know he was supposed to go back in there quite frequently. He was quite interested in that type, as I was myself. At that time they were new to us.

Q. You say he was supposed to go back in there; you mean back in where?

A. Back into the unit.

Q. Back into the engine room?

A. That is right. I may say at that time the class of diesel locomotive was the Alco 4000.

Q. That is the car-body type, the A unit and B unit type?

A. That is right.

Q. What else did you rely on the fireman for on those diesels?

A. Well, he was in a position where he -- he had a plain view of signals with the exception when he was back in the body of the unit and he would more or

less duplicate the same duties as the headend brakeman in calling signals.

At that time the headend brakeman -- the fireman sat to the outside of the unit and he would frequently open the window and look back for a running inspection. The headend brakeman sat in the centre where he had access to both the right and left side of the cab without disturbing the fireman.

Q. What would he do? . What do you mean by that? Was it a running inspection?

A. For a running inspection.

Q. Mr. Crate, based on your experience on freight trains on the Smiths Falls Division, what is the practice as to assigning trainmen? Who assigns them to their position, either at the head or the rear of the train?

A. Who assigns the man?

Q. Yes, who assigns them?

A. They are assigned by the conductor.

Q. Do they take their position on the caboose or on the locomotive and stay there for the whole trip?

A. Not from my observation. They usually changed off for a portion of the subdivision, usually half way, sometimes a little further.

Q. Change off, what do you mean by that?

A. We will start out with a headend train-
man and we will say at a rough estimate
we go half way over the subdivision
and the headend and the rear end train-
men change positions.

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- Q. Would that, or would it not, be with the concurrence of the conductor?
- A. It would have to be with the concurrence of the conductor - he is the man in charge of the train.
- Q. Mr. Crate, have you ever hired a fireman?
- A. No.
- Q. Who hires the fireman on the railway?
- A. The master mechanic.
- Q. Have you ever hired a trainman?
- A. Yes I have.
- Q. Would you please tell the Commission just what takes place when you have hired a trainman?
- A. You are referring, I presume, to when I decide that a man will make a suitable employee?
- Q. Well, you start at the very beginning and tell the Commission what happens. Say, I come in to see you and I am looking for a job as a trainman, what do you do? How would you handle the situation?
- A. That is the point I wanted to get straight.
- Q. Maybe I would not qualify and you would knock me out very easily. I will put it



another way: Say an average chap came in to see you who ~~was~~ looking for a job as a trainman, tell the Commission what you would do.

A. I was wondering if you wanted all the preliminaries. Well, when a prospective trainman comes in or any individual looking for a trainman's job, you find out his age, his education, about his former positions, and if he appears that he would make a suitable trainman you tell him what procedure he is to follow. First of all he would have to take an eye test, and a medical examination, and then he has to write a B Book.

Q. How would he write that, Mr. Crate?

A. He will take that home with him, with a copy of the Uniform Code of Operating Rules, and he will write it from the Uniform Code of Operating Rules.

It is stressed upon him what position he is starting at, the conditions he is to be working under, to be called at any hour of the day or night - and you don't make that sound too easy, because today you want a man who is willing to go to work at any hour when he is working the

spare list. Sometimes when they find out the conditions they will be working under, they are not too fussy.

Then I tell him the important operating rules, starting out with the importance of Rule 90; the sum and substance of that rule is the importance of maintaining a sharp look-out. I will go on and stress to him the importance of complying with all operating rules, signal indications, **which is** also important in maintaining a sharp look-out.

Q. Such as ...?

A. Such as fusees, block signals, train order signals, red flags and what not. Then I will stress to him the importance of protecting the headend of a train.

Q. With what? What do you mean there?

A. Under Rule 99, what he is to look for. In all my experience when a new trainman starts the conductor puts him on the headend; therefore, that is the first responsibility that he should realize what he is going to be up against; he is actually the engineman's eyes on the left side.

BY HON. MR. MARTINEAU:

Q. Will you repeat that please?

A. He is actually the engineman's eyes on the left side when he is riding the headend of the train.

BY MR. SINCLAIR:

Q. After you have stressed these various things - and I suppose this conversation goes on for some time?

A. There are about six features that I stress very strongly: The running inspection of a train - and every railway man knows the importance of that; standing inspection of a train, and what he should be looking for; how he will have to assist the road crew in switching; the importance of handling switches.

After this is done we send him over to the repair track, which is a practice we have instituted not too long ago. We send him there for the purpose of learning how to apply a hand brake of various types; he is there also to learn how to change a brass, how to take down a brake beam, and so on. When he has been there for two or three days, and after he comes over and says he has completed

that, I give him a letter directed to the conductor. That is the authority for the conductor to carry him, and to make comments on his trial trips, which we require them to make five. After the five trial trips are over --

Q. Would they be round trips?

A. Round trips.

Q. That would be over a subdivision and back again?

A. I will say that it could sometimes be four trips, but our practice is five. Then he comes back in, and I ask him several more important questions pertaining to rules, what he would look for if he is riding the headend of a train, what action he would take; I ask him if he has learned how to light a fusee, how to place torpedoes on the track - that is in connection with Rule 99; what side of the track he would stand on to stop an approaching train.

Q. What side would he stand on?

A. On the same side as the engineman of an approaching train.

BY MR. LEWIS:

Q. That is the same side as the engineman on the train going in the opposite

direction, the approaching train?

- A. Yes, the same side of the track as the
engineman on the approaching train.

Then when he has satisfied me
that he has a fair knowledge of the most
important factors in safe operation, we
allow him to go to work. He is closely
followed during his probation period,
which is six months. Prior to six
months he is brought in to an assistant
superintendent and given an oral exam-
ination on the Uniform Code of Operating
Rules. Does that answer your question,
Mr. Sinclair?

BY MR. SINCLAIR:

- Q. Yes. One further thing I would like to
know, do you require a trainman before
he goes out on a pay trip to have a
standard watch?

A. I do.

- Q. You do require him to have one?

A. I do. I have been severely criticized
over it, but I do.

BY HON. MR. McLAURIN:

- Q. On these trial trips is he with a regular
crew?

A. He is with a regular crew on the trial
trips.

- Q. He has no responsibility except to learn?

A. That is correct.

BY MR. SINCLAIR:

Q. Now Mr. Crate, when you fired and ran an engine in the Smiths Falls yard, what was the practice as to giving signals from the ground to the engine in the yard?

A. To my knowledge I have never seen a signal relayed other than on the engineman's side in the Smiths Falls yard.

Q. When did you last work there, Mr. Crate, as an engineman?

A. Well, it would be in 1950 - perhaps the early part of 1951.

Q. Now with respect to road crews operating between terminals, making set-offs, pick-ups, or doing switching between terminals, what was the practice in your experience as to the giving of signals between the ground and the engine?

A. The general practice in years gone by on the Winchester subdivision was to relay signals to the engineman - that is the general practice.

Q. Were there exceptions?

A. Yes, there were exceptions.

Q. You say in years gone by -?

A. I have no idea what they are doing today.

Q. When did you last run at Winchester?

A. 1951; the last trip I made was about six years ago.

Q. What took place in these exceptions that you mention with the road crews?

A. To start out with the Winchester subdivision is a fairly tangent track - straight. At Chesterville on the west bound track, when you switch Nestle's Milk Factory, there is a problem for signals to be relayed to the engineman. In the switching done at Nestle's, signals were relayed to the fireman. However, on occasions on crossing over from the east bound track to the west bound track at De Beaujeu - naturally both switches on the cross-over should be thrown before you make a movement - when cars were being set off on the back track adjacent to the westward main track, the trainman would throw the eastward main track switch and cross over and throw the westward main track switch, and periodically he would give signals to the fireman to back up. On other occasions he would cross over to the right side. There

was no reason why he could not do it.

Q. Why did he not do it?

A. For his own convenience. That is about the only answer I can give to that.

Q. There are two exceptions that stick in your mind. Were there others?

A. Yes. Running into Cornwall, in the Cornwall yard, when you were making up your train, after the train was made up and a doubling movement to the headend of it or to the rear of it to complete your train, singals were relayed on the fireman's side.

Q. And why were they relayed on the fireman's side there?

A. More convenient for the train crew; and I will say this, the conductor would be busy; he would not be in a position at that time to assist the crew; he would be over in the freight shed trying to get ^{cleared} ~~clear~~ and get his way bills.

Q. Could two men make the switches on the engineman's side at Cornwall - that is two men on the ground - or in your opinion would it require three?

A. To answer that question a lot would depend on the length of the train.

Q. Do you mean the length of the train

or the length of the cut?

A. The length of the cut.

Q. All that would depend on the cut you say?

A. That is right. I would say that in all cases it could be done with three men if they positioned themselves properly.

Q. And if you reduced the size of the cut that you were doubling, and did it in two instead of one...?

A. If the cut was small, say five to six cars, or seven cars, two men could do it.

Q. Two men on the ground?

A. Two men on the ground.

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Q. Now, these other places you have mentioned, would it be possible if there were no firemen on the engine for signals to be relayed direct to the engineman by the balance of the crew -- these other places you have mentioned, in your opinion?

A. At Chesterville, you would have to have a man up in the cab.

Q. At Chesterville west bound?

A. West bound, yes.

Q. What about Chesterville east bound?

A. There is absolutely no difficulty because the curve going in there east bound is on the engineman's side where he is in plain view all the time.

Q. And you say west bound to do it you would have to put a man on the left-hand side?

A. Yes.

MR. LEWIS: In the cab.

THE WITNESS: In the cab.

BY MR. SINCLAIR:

Q. Other than that, do you recall any place where you run into difficulties?

A. No.

Q. Now, Mr. Crate, have you recently made a check of your own territory

where you are now assigned as to locations between terminals where freight trains might be required to set out, to pick up or to switch, to ascertain whether moves could be made there without the use of the fireman as a signal passer?

A. I have.

Q. Where did you check?

A. Personally, I checked the Parry Sound subdivision.

Q. Yes, and any other part of your territory?

A. I made a general check of the North Bay subdivision.

Q. Now, from your detailed check of Parry Sound and your check of North Bay, what did you find?

A. I found that with the exception of one particular spot on the Parry Sound, signals could all be relayed to the engineman on the Parry Sound subdivision.

Q. On the right-hand side, do you mean?

A. Correct.

Q. The one spot that you have in mind on the Parry Sound, if there is no fireman what would be required?

A. They would have to change their method of operation; that is the Parry Sound switch job when he is coming into the shed. There is a height of land there

that obstructs the view of the trainman relaying signals on the engineman's side. I feel that with a smaller cut of cars going into the shed, two or three cars, with the trainman on top he could do it. With your present day operation, they operate from the left side.

Q. At that location again, could two men do the move from the ground and put a third man in the cab on the left-hand side?

A. Have to have a man on top.

Q. Putting one man on top?

A. You mean the present day operation?

Q. Let us say we will put one man on top, one on the ground and one man in the cab on the left-hand side; could you make the move then?

A. You could make the move. You mean if I put a trainman on the left side of the locomotive?

Q. Yes.

A. Yes, that is what they are doing now,
only doing it with the fireman.

Q. Can the other two men do the move on the ground?

A. Correct.

Q. Without difficulty at all?

A. Correct.

Q. Now, the balance of the subdivision, the locations that might cause difficulty for a signal passing if the fireman wasn't there, have you had a check made, not by yourself, but by your assistant?

A. Yes.

Q. Have they reported to you?

A. They have.

Q. What did they report?

A. They have reported the present procedure and what can be done. The present procedure today at Sudbury, for example, through freight crews come in there, and this is general practice at Sudbury and various points, the headend trainman in order to assist the train over the road undertakes to set a car or a number of cars off alone. When he is alone it is necessary sometimes for him to give signals on the left side. If he waits until the conductor or the rear trainman come up, naturally there is going to be some delay.

At Mattawa, I observed personally and I am told by my assistants that this is the practice there as a rule, one man coming out of the back track

going west at Mattawa, the signals are usually relayed from the left side, but they could be relayed with three men and at times a smaller cut of cars.

Q. You are talking of Mattawa?

A. Mattawa, that is on the North Bay subdivision. There are movements made down into the tail track at Mattawa which is on the north side of the station in identically the same way.

Q. Well now, Mattawa was the only place they told you, and you said generally over the subdivision?

A. Mattawa on the North Bay; that was the one that was foremost.

Q. That was the particular one that was brought to your attention?

A. Yes.

Q. What about the general practice; what did they say other than that?

A. They have said signals are given at other points on the left side for the convenience of the train crew.

Q. Did they tell you or did they not any locations where, if a fireman was not used, moves could not be made safely?

A. They could not.

HON. MR. MARTINEAU: The Witness started to speak a few minutes ago about the Parry Sound subdivision and North Bay. Immediately after, he spoke of signals being given in the Parry Sound subdivision on the engineman's except, and then he said one location. What about North Bay?

MR. SINCLAIR: On North Bay, the one he just spoke of was Mattawa.

HON. MR. MARTINEAU: Mattawa is on the North Bay subdivision?

MR. SINCLAIR: Yes, and the place on the Parry Sound subdivision where the cuts would have to be smaller was a switch shed where?

THE WITNESS: At Parry Sound itself.

HON. MR. MARTINEAU: That is all right.

BY MR. SINCLAIR:

Q. Mr. Crate, based on your experience as a fireman, as an engineman and as a rules instructor, what is your opinion as to the hazard, if any, of an unscheduled stop?

A. I do not see any hazard in it at all. They are well protected by the Uniform Code of Operating Rules. The men in train service all understand. They



are happening every day on the railroad.

Q. Have you, and this is a question with your permission, Mr. Chairman, I overlooked asking before, Mr. Crate, have you checked the Sudbury yard as to giving signals from the ground crew to the engine by yard crews there?

A. I have.

Q. How many yard crews are assigned at the Sudbury yard?

A. Nine around the clock.

Q. What did you find as to the way signals are given from the ground crew to the engine in Sudbury?

A. With the exception of five months ago, I found signals are all relayed on the engineman's side.

Q. What was the exception five months ago?

A. We had a slight affair in Sudbury yard. An engine was making a switch into the Cochrane spur which is on a left-hand curve. The yard men were giving signals to the fireman and through some mistake in acknowledgment of the signals to the engineman they made a rough coupling to boarding car and injured a cook. At that time, it was brought to their attention it

was not a necessity but could be done from the right side if the yard crew got in proper position. From that day to this, signals are not given on the left side at that point.

Q. That was the only exception?

A. The only exception that ever has been brought to my attention and my observation is that they are given on the right side. You are talking about yard crews?

Q. Yes, yard crews.

A. O.K.

Q. I take it what you meant by your last remark, Mr. Crate, was --

MR. LEWIS: Let my friend ask the witness what he meant by his last remark instead of telling him.

MR. SINCLAIR: I thought he had done that.

THE CHAIRMAN: He may have.

BY MR. SINCLAIR:

Q. What do you mean by your last remark?

A. I had already made a statement that road crews coming into Sudbury to set off or pick up, with one man, it is done on the right-hand side.

Q. With one man, what do you mean by that?

- A. One trainman.
- Q. Where are the other two members of the ground crew?
- A. The road crew?
- Q. Of the road crew, yes.
- A. They are at the rear of the train and could be 60 to 75 cars away.
- Q. Now, Mr. Crate, in these moves, the switching by road crews or setting out or picking up by road crews, these various moves, would you or would you not be prepared to take whatever delay there was involved in bringing the crew up from the rear to assist in switching or set outs or pick-ups?
- A. My observation, since the introduction of diesel power, the delay in a conductor and trainman coming up to assist the headend trainman in lifting or setting off would be small compared to the number of stops that the steam engine was required to make for fuel and for water, which has been entirely done away with. Therefore, I feel that if I come to a station and have to take 10 or 15 minutes delay on account of the rear train crew coming up to assist in switching, with the over-all picture we are still far

ahead of a few years ago with steam power so far as time is concerned.

Q. Now Mr. Crate, you have prepared this Exhibit No. 125, a statement showing the number of through freight trains excluding way freights which performed switching en route, and this is similar to an exhibit filed by Mr. Fraine and also by Mr. Fraser -- Exhibit 108 was Mr. Fraine's and Exhibit 119 was the one filed by Mr. Fraser.

EXHIBIT NO. 125: Statement showing number of through freight trains, excluding way freight, which performed switching en route, November, 19

BY MR. SINCLAIR:

Q Now, will you just explain what is meant by "switching" here? What are you dealing with in this exhibit, Mr. Crate?

A This is the number of through freight trains excluding way freights which perform switching en route.

Q And what do you call switching?

A Where he has a car to pick up or set off or perhaps spot a number of cars.

Q All those various kinds of moves are included?

A Correct.

MR. SINCLAIR: That is the same in those other two exhibits. I wonder if my friend would accept my statement. Mr. Fraine, you will recall, had used "switching" and sometime in a narrow sense --

MR. LEWIS: "In the correct sense", my friend said.

MR. SINCLAIR: It was "the correct sense" in the train schedule sense but the exhibits included all forms of moves, pick-ups set-outs, spotting and so on.

MR. LEWIS: Of course, I will accept the statement.

THE CHAIRMAN: The word does not vary in meaning from subdivision to subdivision?

MR. SINCLAIR: No in so far as the exhibits are concerned.

BY MR. SINCLAIR:

Q This exhibit demonstrates what? You have got North Bay, Cartier, Parry Sound and Thessalon subdivisions, that is, four subdivisions and it demonstrates what?

A The total number of through freight trains.

Q Yes.

A The through freight train, as you understand does not necessarily have to be a scheduled train. It could be an extra train that is running through perhaps with one car to set off at some intermediate point and, as you will note, the total number of through freight trains was 236 for the month of November, 1956 on the North Bay subdivision. Trains which performed no work at stations en route were 157 or a percentage of 66.5 per cent.

THE CHAIRMAN: I suppose that is all written out here?

MR. SINCLAIR: So I think the exhibit speaks pretty much for itself right through.

THE WITNESS: In other words, there would be 66.5 per cent of the trains that would leave North Bay and would make no stops other than inspection.

BY THE CHAIRMAN:

Q Does the description "through freight trains" include all freight trains over this subdivision except way freights?

A That is correct.

MR. SINCLAIR: I think with that, sir,
the exhibit speaks for itself pretty well.

BY THE CHAIRMAN:

Q Now, the North Bay subdivision is from where
to where?

A From North Bay to Chalk River.

BY HON. MR. MARTINEAU:

Q North Bay to where?

A North Bay to Chalk River.

BY THE CHAIRMAN:

Q Cartier?

A The Cartier is from North Bay to Cartier.

Q Is Cartier east or west of North Bay?

A. Cartier is west of North Bay.

Q. Parry Sound?

A. Romford to MacTier. MacTier is south
of Romford.

Q. ~~Fecillon?~~ Thessalon?

A. From Webbwood to Sault Ste. Marie.

MR. SINCLAIR: Now Mr. Crate has
made a number of trips which I would like
to introduce as Exhibit 126. Would you
mark that as Exhibit 126, please, Mr.
Crate. There are nineteen observations
made by Mr. Crate, each of them signed
by him.

EXHIBIT NO. 126: Trip record
of Mr. Crate
for 19 trips
of Sudbury
Division.

BY MR. SINCLAIR:

Q. Do these cover every trip you were able

to make from the time I requested it from you, Mr. Crate?

A. That is right.

Q. Until I had to get them in and asked you to send them along to me?

A. Yes.

Q. They are all on the Sudbury Division?

A. That is correct.

Q. Well now, taking number one on Exhibit 126 it is engine No. 3749. That is an N-3 Class steam hand-fired locomotive, is that correct?

A. That is correct.

Q. It is a mixed train, six cars, and it is from Sudbury to Little Current and it is 80 miles. On the preparatory duties of this steam engine:

"Test injector, tricocks,
water glass. Examine fire box,
test grates, check supplies,
^{fill}
~~fuel~~ oil feeder ..."

I said that was an N-3. It is an N-2, I have been told, hand-fired, I am sorry.

^{F. 11}
"Fuel oil feeder, prepare
fire, check flagging equipment,
water, coal and sand supply."

Now, under "details of duties performed by fireman en route" you say:

"Fireman on deck of engine approx. 65 per cent of time maintaining steam pressure. Was in position to communicate indication of three train order signals. At no time left cab, except to take water at Turner and Espanola. Read train orders."

"Final inspection duties performed by fireman" --

"Fire left in satisfactory condition. Check water glass gauge, cocks open, sufficient water left in boiler, heater set on injector."

Under "additional comments" --

"No automatic block signals on above subdivisions. Three train order signals only. Rear *car* set off at Copper Cliff and Espanola signals relayed on engineman's side."

Any comment on that?

MR. LEWIS: My friend read "rear set-off". It is "one car set-off".

THE WITNESS: No more than I would mention that I would not ride this locomotive in view of the fact that the fireman was young and he was experiencing some difficulty. I would explain here that these engines are not the very easiest in the world to fire. These boys do not very often get them on the main line. They are generally assigned to a road switcher. That is what this engine was going to Little Current for, to change off with one that was down there.

I was able to obtain the information I have on there. I wanted generally to find what their switching movements were. I was able to find out from the engineman, of which I have no doubt at all knowing what the fireman would be confronted with in firing this locomotive and his seniority and have verified the fact that he was on the deck the percentage of time I have on the sheet.

BY MR. SINCLAIR:

Q. This 65 per cent then is the engineman's estimate?

A. Yes, that is right. I would also say that I felt as though it was no position for me in view of the difficulty he would have firing the engine. He would be embarrassed enough without me being up there and I would only be in his way when he was trying to

perform his duties.

Q. Now, we have got on Sheet 2 the same man -- how long had this man been a fireman, do you remember -- a few years?

A. Not very long. I would not want to make a statement on that. I recall this fellow. Off hand I would doubt if he had been on a year, but I am not just sure of that. I know he was a young fireman. Whether he was one year or 18 months I couldn't tell you.

MR. SINCLAIR: We will look up his record and advise the Commission and my friend if it is satisfactory to the Commission.

BY MR. SINCLAIR:

Q. Now, the second one is the same man on another steam engine 3714 steam engine, same fireman?

A. This is on the return trip.

Q. Picked up a different engine and brought it back?

A. And the same procedure was followed as far as I was concerned on the return trip.

Q. That is, the estimate of 75 per cent this time was given to you by the engineman?

A. The engineman told me he had a terrible

time trying to keep it hot.

Q. And you observed the switching by this train?

A. That is right.

Q. I notice it only had 15 cars?

A. The tonnage is very small on the Little Current subdivision, approximately 1,500 tons for that type of an engine.

Q. But you had 15 cars or 1,110 tons?

A. He is still light on tonnage, but I just mention that he would not want very many more cars to have his full tonnage.

Q. Now, "additional comments" you have noted:

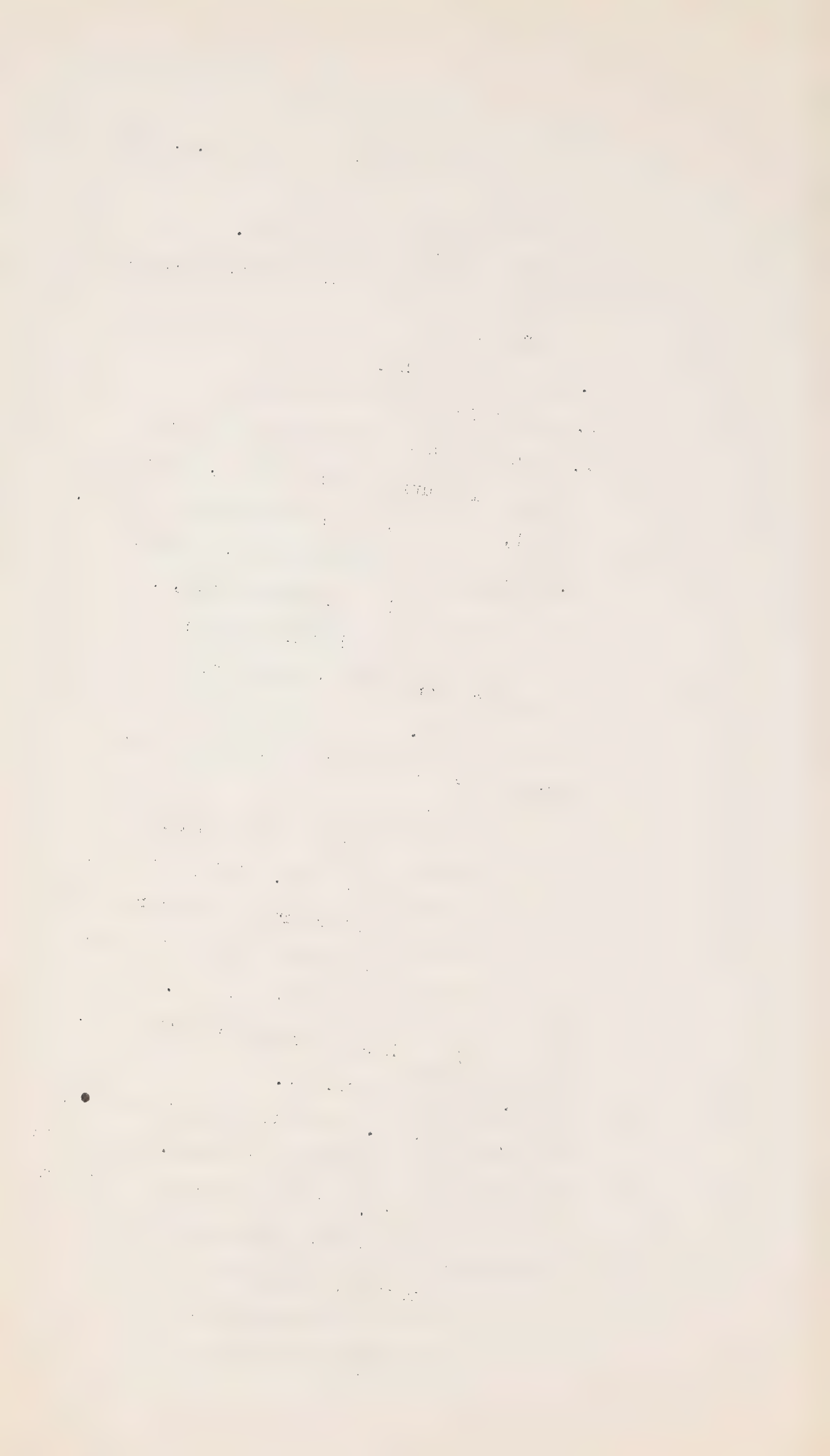
"Three train order signals on above sub. div's, two cars set off McKerrow, one car lifted at Espanola, signals relayed on engineman's side".

Were those your own observations?

A. That is correct.

Q. Now, No. 3 I notice, is a car body A and a car body D diesels. There are 57 cars. You show the preparatory duties of the fireman, detailed duties performed by firemen en route:

"Communicated indication of train order and automatic



"block signals when in cab. Left cab on five occasions for a total period of 25" to enter engine room for no apparent reason. Running inspection of train. Identification of trains met. Read train orders."

Were you in the cab over the entire trip of the leading unit?

A. The entire trip. I may say for your information when I put in there "to enter engine room for no apparent reason" that I questioned this fireman and several others as to why you are going back there when you are **not** required to and they gave a very good answer and said: "Well, you know, we have always continued doing this. We feel as though it is our responsibility" and so they have just continued doing what they had formerly done.

Q. In your division did you put out a bulletin advising firemen as to their duties?

A. That bulletin is ... They will assist the engineman and they will comply with all the rules of the Uniform Code of Operating Rules.

Q. Did it have anything to say about patrolling?

A. "Not required". That is why I asked them because I felt as though later on that you might want to know why I said "for no apparent reason".

Q. Did the engineman ask them to go back in your presence?

A. No.

Q. Did he make any report to the engineman on his return, the fireman?

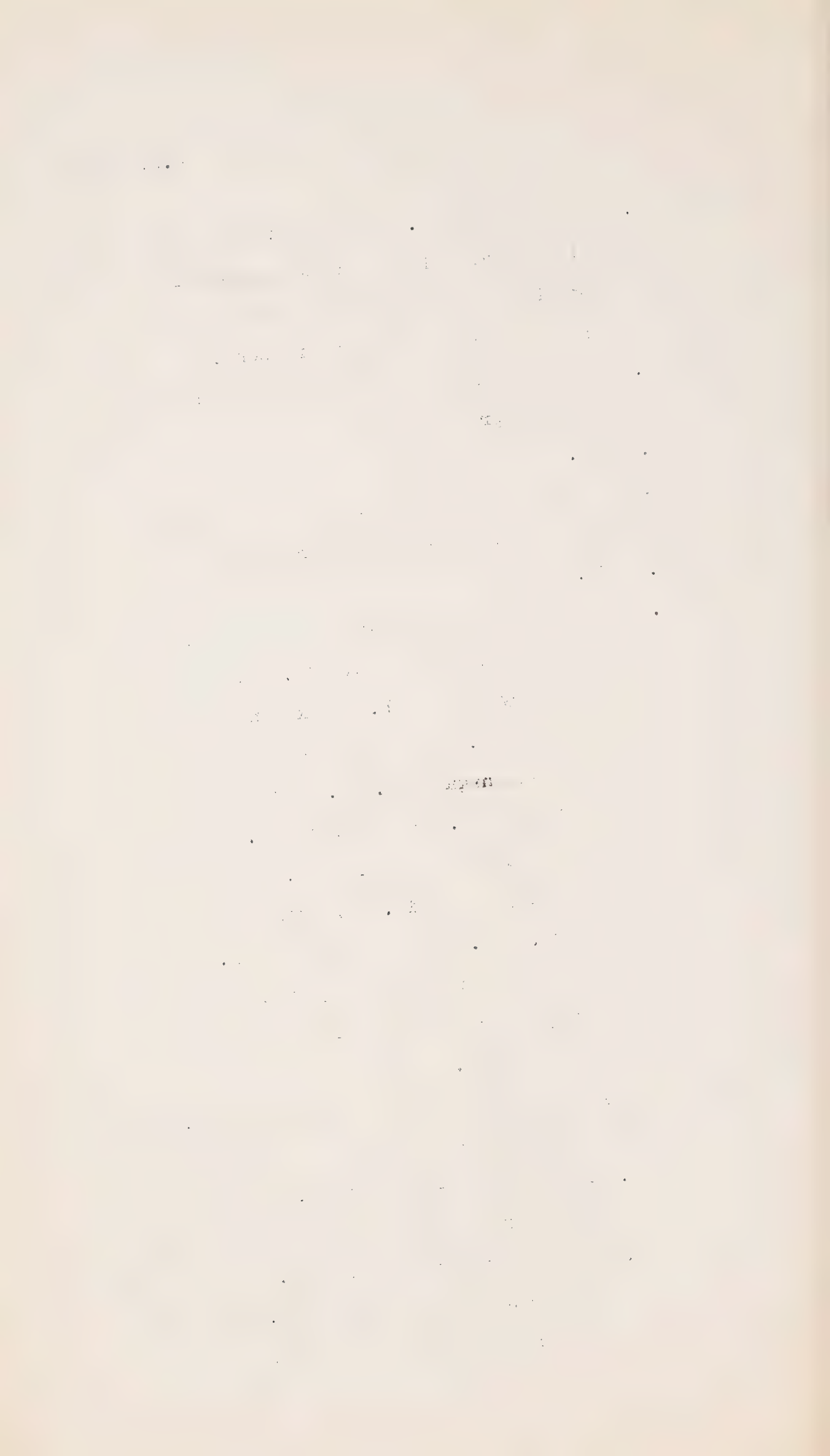
A. No.

Q. Under "Additional comments" you say:

"Stop made at mlg. 36.5
Parry Sound sub. to examine
hot box. Car s set off at
Shawnanaga mlg. 40.9 Parry
Sound sub. account hot box.

Flagged by M. of W.
employee at mlg. 77.1 Cartier
sub. div. account broken rail.
At no time during trip where
signals relayed to or accepted
by fireman."

A. Now, I may make a few comments on that. There is an unscheduled stop at mileage 36.5 for a second-class train. There is another unscheduled stop at mileage 77.1 on the Cartier subdivision. There was one car set off at Shawanaga, that was the car that was running hot.



Q. No. 4, Mr. Crate ...

THE CHAIRMAN: We will take a
break here, Mr. Sinclair.

MR. SINCLAIR: Thank you, sir.

--- Recess.

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J.F.CRATE, Recalled

BY IR. SINCLAIR:

Q We were at No.4 Exhibit 126. These are car body units A and B. Under "Details of duties performed by fireman en route" you say:

"Road train orders. Fireman in engine room on two occasions for no apparent reason. Fifteen minutes between Romford and Burwash. Ten minutes while standing inspection made at Britt. Position of train order and block signals communicated when in cab."

Then under "comments on preparation of Form M.P.74" you say:

"Engine shutters unit 4011 to be repaired. Right window left to be repaired unit 4011."

Then under "additional comments" you say:

"During trip no switching necessary. Standing train inspection Romford ten minutes; Britt ten minutes. Units from shop track Cartier".

Then page 5. These are two A units running back to back.

A That is correct.

Q That would mean that there would be one cab in the lead and one cab next to the train and the two engines back to back?

A That is right.

Q These were car body types. Under "details of

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duties performed by fireman en route" you say:

"Read train orders. No switching operations. Fireman in engine room five occasions for a total of 20 minutes en route. Position of train order and block signals communicated when in cab. Running inspection of train. Identification of trains met."

Then under "comments on preparation of Form M.P.74" you say:

"Water leak on right side of control panel and floor of unit 4015."

Then under "additional comments" you say:

"Train inspection (standing) Britt 10 minutes; Sudbury 10 minutes. Units from station ^{at} ~~and~~ MacTier."

Then page 6. These are road switchers.

On all these diesels trips that you have covered in these observations did you ride the leading unit for the entire trip?

A At all times.

Q I think this one speaks for itself. There is nothing particular to draw to the attention of the Commission on that. The next one is No.7. That is a road switcher and a B unit, car body type. Here again it speaks for itself and I think there would be no particular comment, Mr.Crate.

A None.

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Q Then No.8 Exhibit 126, road switcher and B. That is the same type that was under observation in No.7 but a different subdivision.

THE CHAIRMAN: Which is the road switcher?

MR.SINCLAIR: The road switcher is 8431 and the lead unit, the next unit is a B unit car body type.

BY MR. SINCLAIR:

Q Under "details of duties performed by fireman en route" you say:

"Read train orders. Out of cab five minutes Ayles, five minutes Hodgson while meeting trains inspected units, communicated train order and automatic block signal indication. When lifting 16 cars at Mattawa accepted back-up signal from trainman and communicated same to engineman. Running inspection. Identification of trains."

Then under "additional comments" you say:

"Necessary to set off two cars behind one at Mattawa in No.3 shed track. Signals relayed from engineman's side. 16 cars lifted from back track ^{at} ~~to~~ Mattawa and when same cleared main track switch diesel units on slight lefthand curve. Back-up signal relayed to fireman. Same could have been avoided if rear trainman had been in position to assist in lifting. Units from shop Chalk River."

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No. 9, under "Details of duties performed for firemen en route" you say --

MR. LEWIS: Is this the same unit?

BY MR. SINCLAIR:

Q. Here you have the same units; you are carrying them along on different trips, is that right, Mr. Crate - road switcher and a B?

A. They run from Chalk River to Sault Ste. Marie.

Q. And you carried them through. Under this heading you say:

"Communicated indication of train order signals. When doubling over 36 cars to head end of train at Webbwood fireman relayed back signals to engineman on account of left curve on main track west of yard. Fireman out of cab five minutes at Eley, mileage 68.5 and five minutes at Bruce, mileage 95.1. Read train orders."

Under "Additional comments" you say:

"Twenty-six cars set off at Eley, mileage 68.5, signals relayed on engineman's side.

Double over at Webbwood can be made with trainman on top of cars in position to relay signals to

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"engineman. Units from shop
Webbwood."

I now turn to Sheet No. 10; this trip is again coming back from Sudbury to Thessalon; they are the same units - you have turned them around and now you are going back.

MR. LEWIS: They are not coming from Sudbury to Thessalon?

MR. SINCLAIR: I am sorry, they are coming from Sault Ste. Marie to Webbwood, 131 miles.

BY MR. SINCLAIR:

Q. Mr. Crate, this speaks for itself. I turn to No. 11: This is a 1200-class, stoker-fired steam engine, is that correct?

A. That is correct; it is the way freight.

Q. I see this crew was out from 8.35 a.m. until 8 p.m.?

A. Correct.

Q. Did they tie up for a lunch period?

A. Yes, we ate at Britt that day.

Q. How do they do that? Do they advise the despatcher they are tying for 30 minutes, or whatever time they require?

A. Yes. On this occasion we were at Britt for 3-1/2 hours that day; they advised the despatcher they are going to eat there and have considerable

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switching to do there; they just keep out a certain time.

Q. Under the heading "Preparatory duties performed by fireman" you say:

"Prepare fire, examine gauge mountings, try cocks, fire box, ash pans, check grates, water, sand and coal supply, engine supplies and flagging kit."

Under the heading "Details of duties performed by firemen en route" you say:

"Fireman in cab at all time, during switching operations necessary to maintain steam pressure and water supply in boiler. Accepted back-up signals at Britt on one occasion. En route in a position to observe fixed signals and communicated same, checked train orders and identified trains met."

A. Yes.

Q. Under the heading "Final inspection duties performed by firemen" you say:

"Engine left on shop track with fire banked..."

What would you estimate to be the time this man was on the deck on this stoker engine, Mr. Crate?

A. While running I would say practically nil. All way freights stop at every

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station, and he had a very good tender of coal and a good engine. He has a chance at every station to observe his fire.

Q. And this was a very light train, 13 cars?

A. That is correct.

Q. During the switching were you making close observation?

A. Yes, I was with them all the time - not necessarily on the engine, but I was around the switching movements and saw what was taking place.

Q. You say, "during switching operations necessary to maintain steam pressure and water supply in the boiler." Was he on the deck some time during the switching operations?

A. No, not to my knowledge. As I said, I was not on the engine all the time, but any time I observed him he was in a position on the seat.

Q. Under the heading "Additional comments" you say:

"Switching 4 way points en route: 3-1/2 hours switching at Britt. Signals can be relayed to engineman with trainmen in proper position at Britt."

During your observations on this trip, you recorded only one occasion when the fireman accepted a signal from the ground?

- A. That is right. That is when we were backing out of Britt yard to the main track, and the trainman threw the derail and relayed the signal to the fireman; but he could have crossed over and got in a position to relay it to the engine-man.

BY THE CHAIRMAN:

- Q. I am afraid I did not just understand what you said in answer to the question as to what proportion of his time the fireman spent on the deck?

- A. I said I would say practically nil, Mr. Chairman.

BY MR. SINCLAIR:

- Q. When?

- A. When running and during switching.

BY THE CHAIRMAN:

- Q. When did he fire the engine?

- A. The engine is a stoker-fired engine, Mr. Chairman.

BY MR. SINCLAIR:

- Q. When did he look at his fire or do whatever work he needed to do on the deck?

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A. When he was stopped, unloading way freight.

THE CHAIRMAN: Although I made a note of that, I missed it for the moment. Thank you.

BY MR. SINCLAIR:

Q. The next sheet covers your observations on two A units, car body, back to back. Is that correct, Mr. Crate?

A. That is right.

Q. I notice under "Details of duties performed by firemen en route" you say:

"Check train orders, communicated train order signals. Out of cab 4 times for a period of 30 minutes during trip. Ten minutes out of cab when doubling movement made Sudbury yard. Assisted trainman unloading way freight at two stations." Under "Additional comments" you say:

"57 cars set off at McKerrow
3 cars lifted at McKerrow
2 cars set off at Espanola
9 cars lifted at Espanola
Fireman relayed signals at McKerrow when lift backed on to train. This could have been avoided with train crew in proper position."

Is that the only time he was used as the signal passer on those moves?

A. That is correct, on that westward trip.

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BY THE CHAIRMAN:

Q. What does this mean - "Out of cab 4 times for a period of 30 minutes during trip?"

A. He would go back in the body of the unit; he did that on four occasions for a total of 30 minutes.

BY MR. SINCLAIR:

Q. I think the point of your observation is "10 minutes out of cab when doubling movement made Sudbury yard."

A. That is right.

BY MR. LEWIS:

Q. Was he out of the cab inspecting or helping?

A. At Sudbury?

Q. During the doubling move.

MR. SINCLAIR: What do you mean by "helping"?

BY MR. SINCLAIR:

Q. What was he doing when he was out of the cab?

A. He was out with my permission.

Q. To do what?

A. To go and get a package of cigarettes.

Q. For you?

A. Not for me.

Q. For himself?

A. That is right.

Q. Did he ask you if he could go?

A. He was very frank about it, he asked me. I was in a position to see the signals were relayed on the engineman's side on the doubling movement.

Q. Were you taking his place on the engine?

A. More or less. I was in a position to observe if anything occurred on the left side.

Q. Was that necessary on this move, in your opinion?

A. It is not necessary, but I was there.

Q. If you had not been there, do you think he would have asked the engineer to go and get cigarettes?

MR. LEWIS: Mr. Chairman, please...

MR. SINCLAIR: I was just wondering if this fireman was different from any others.

THE CHAIRMAN: The question has not been put, Mr. Crate.

BY MR. SINCLAIR:

Q. The next sheet is No. 13: Have you any comments to make on that sheet, Mr. Crate? Under "Details of duties performed by fireman en route you say:

"Check train orders, communicated train order signals, running inspection of train, out of cab four times in engine room of units for 30 minutes during trip."

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Under "Additional comments" you say:

"2 cars set out at Espanola
27 cars lifted at Espanola
6 cars set out at McKerrow
14 cars set out at Creosote
Fireman relayed signals at Espanola
when lift of 27 cars made. Signals
could have been relayed to engine-
men with full crew participating
with a trainman on top."

I turn next to Sheet 14. These are road
switchers. Under "Alarms and defects
en route" you say:

"One overspeed trip 12.40
p.m., mileage 18. Reset in 30
seconds, unit 8435."

That is the lead unit?

A. Correct.

Q. "One overspeed trip 1.30 p.m. mileage
38. Reset in 30 seconds, unit 8435."

That is again on the lead unit.

"Fireman reset overspeed
trips."

Where is the overspeed reset on that
unit?

A. On the left side of the engine room,
outside the cab.

Q. Did he go out while you were in motion?

A. He did.

Q. If the unit had died, produced no power, with that tonnage could you have got along on the other unit to the next station?

A. Yes, at that point.

Q. One unit would have taken you into the clear?

A. That is correct.

Q. Under the heading "Details of duties performed by fireman en route" you say:

"Read train orders, communicated train order signals. Running inspection of train. Out of cab 10 minutes inspecting units when standing inspection of train. One minute out of cab resetting overspeed trips."

The two overspeed trips were entered on MP-74, as well as connecting of sand pipe, right side of unit 8435. That was the unit you were having the overspeeds on, Mr. Crate?

A. That is correct.

Q. Is there any relation between the two?

A. As I mentioned previously, my experience with diesels was very limited, and I can only go on the information that is relayed to me from the engineman: That

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was his thought, that the lack of sand was responsible for the overspeed trip; and as you can see, on the MP-74 he booked the sand and nothing else.

Q. And he also booked the overspeed trips?

A. That is right.

Q. The next is No. 13: I think this one speaks for itself. You have no comments on that?

A. No.

Q. The next is No. 16: Again this is a road switcher. No. 14 and No. 15 were road switchers, and No. 16 is a road switcher on lead and B unit, car body type. Is there anything in particular on this one, Mr. Crate?

A. No; that was a through train - no switching en route.



Q Then, No. 17; a road switcher and B unit, the same unit as in the previous one. Here you say, "Check train orders; communicate train order and automatic block signals. Out of cab three minutes when stopped for meet at Adelard. Relayed signals to enginemen when 17 cars set out in tail track at Mattawa and 20 cars lifted from back track." Earlier in your evidence you have dealt with the situation at Mattawa, have you not?

A I did.

Q Then, comments on preparation of form MP-74. "Unit 8589, examine unit and all water and oil levels. Put window in frame of fireman's windshield. Unit 4420 -- examine unit and all water and oil levels. Right No. 1 and 2 cylinders leaking fuel very bad. Oil on deck of unit."

Then, No. 18; details of duties performed by fireman en route: "Check train orders; communicate train order signals; out of cab on two occasions to inspect units for a period of 10 minutes. Relayed signals to engineman when 50 cars doubled to head of train at Webbwood." Then, your comments: "Three cars set off at Blind River, signals relayed on engineman's side when doubling 50 cars to head end at Webbwood signals could have been given to engineman if conductor and rear trainman had come up from rear to assist

and take up proper position with head end trainmen on top of car near engine."

Then, No. 19, which is the last of these observations which are set out in Exhibit 126. This is a road switcher and a B unit. "One overspeed alarm at mileage 33.5 on unit 4420. Road foreman J. H. Shuham, accompanied by fireman reset same in 60 seconds."

Was the road foreman with you on this trip?

A This is the only case, I did not mention it before as far as I had gone, and I believe you asked me a question on diesel trips if I had ridden in the cab.

Q Yes?

A On this occasion I had the road foreman with me and out of Sault Ste. Marie I went to the rear of the train and allowed the road foreman to ride to the time we stalled and I went up and rode from there in on the diesel. On the others, though, I never left the cab.

Q On this overspeed trip you have your comments. "Unit 4420 not operating account worn brushes in amplyne exciter, resulting in train stalling mileage 33, necessary to double to mileage 18.

BY THE CHAIRMAN:

Q What is involved in that?

A Mr. Chairman, this B unit completely died, lost all power and with the tonnage of the train she

naturally stalled. Therefore it was necessary to cut part of the train and run to mileage 18.

Q You mean by that that you left part of the train on the track?

A On the main track and took the lead portion over to mileage 18.

Q That is 15 miles away?

A That is correct.

Q What about the cars left on the main track?

A They were left under protection. The rear of the train, we had a form U train order which is rear end protection. Actually, in railroad language it means it is not necessary for a flagman to protect the rear of his train.

BY MR. SINCLAIR:

Q That is because the dispatcher had protected it?

A A form U train order reads that the operator at Sault Ste. Marie hold all trains following 912 until 4.30 a.m.

BY THE CHAIRMAN:

Q So the cars left on the main track were left unattended, were they?

A The rear of the train was protected by the train dispatcher and the front of the train was protected by the crew in accordance with operating rule 101 which says when a doubling movement is made the rear portion of the train, you will leave a red light on the lead end and place torpedoes a sufficient distance in

advance.

BY MR. SINCLAIR:

Q How many of the crew stayed with the cars left on the main track, Mr. Crate?

A There was the conductor and trainman.

Q Who went with the front portion?

A The road foreman, the head end trainman, the fireman and engineman.

Q If the road foreman had not been there, how many of the crew would have gone with the front part?

A It would not have been necessary to have any more than did go, but it might have been possible one more man would have gone.

BY THE CHAIRMAN:

Q The two of the train crew that were left with the car standing on the main track, were they put in any position, in any particular position, or were they in the caboose?

A No, when the train stalled the conductor and rear trainman walked up to find out what was wrong. They had no idea what had taken place. When they came up and found out they had had engine trouble, it is decided that their best move is to take a portion of their train over to mileage 18 and come back and get the other portion. The reason for going the 15 miles --

Q I am not asking you that, I understand that, but there were a certain number of cars left standing on the main track?

A Correct.

Q And there were two members of the train crew with that body of cars?

A That is correct.

Q Where did they stay, in the caboose or where?

A No, at the head end of the portion left on the main track.

Q Were they in charge of any signals there or have any flagging?

A They had to set out their protection in accordance with the regular Code of Operating Rules.

Q Just tell me what that was?

A They left a red light on the leading car and placed torpedoes a sufficient distance in advance, that is for the engine returning.

Q And having done that, where would they go?

A The conductor, he went back to the caboose and set up his phone. I got on the phone and talked to the train dispatcher and told him we would require more rear end protection and also advised him of the difficulty we were in and to have a diesel maintainer at Webbwood and also have a steam engine available to assist the train from Webbwood to Sudbury. The head end trainman at all times remained with the head end portion left on the main track. After we had got protection from the train dispatcher for the rear of the train, the conductor and I walked up to the head end

of the portion left on the main track and there remained until the engine returned. Then, I rode the engine along with the head end trainman and the road foreman over to Wallford, where we picked up the front portion of the train and proceeded out of Webbwood, which is the terminal.

Q How many cars were in this train?

A 68.

Q And where was the break in the train made?

A 35 cars, approximately.

Q Those were left standing on the track?

A Correct.

Q And the engine took the other 33 with it?

A That is right.

Q And they went the 15 miles?

A Right.

Q Now, I am talking about the 35 cars that are left standing on the track. The rear of that was protected by the despatcher somewhere?

A That is right, by a train order.

Q The front of that was protected by a red light on the lead car?

A And torpedoes a sufficient distance in advance, four torpedoes.

Q Yes, and then the head end trainman stayed with the lead car?

A At the lead end of the cars left on the main track with fusees.

Q And then the conductor stayed where?

A The conductor, when he had come up to find out what was wrong, went back to the van.

Q So far as you know, those cars, the 35 cars, were standing on the track while the engine went for assistance, and the conductor was in the caboose and the head end trainman was at the front car?

A Would you mind repeating that, Mr. Chairman?

Q The 35 cars that were left standing on the track while the engine went along with the other 33, I understood that the conductor was in the caboose and the head end trainman remained at the lead car of the 35?

A No.

Q Well, just a minute, now; the conductor, you told me, went to the caboose and stayed there?

A As soon as they stalled, the conductor and rear end trainman walked up to find out --

Q I understand all that.

A So, when the 33 cars left the conductor was still there and as soon as they left the conductor went back to the van.

Q The conductor went back to the van, and let us leave him there?

A That is right.

Q And the head end trainman stayed with the 35 cars stalled on the main track, that is right?

A Correct.

Q He stayed with the lead car?

A That is right.

Q That is all I want.

BY MR. SIN LAIR:

Q The head end trainman stayed with the cars?

A No, the rear end trainman.

Q The head end trainman went with the other cars?

A Yes.

BY HON. MR. McLAURIN:

Q You were with the conductor and you went to the caboose and phoned the despatcher and when you got everything cleaned up there you walked up to the front of the train?

A That is right.

Q And you were there when the engine came back?

A That is right.

BY MR. SINCLAIR:

Q Now, Mr. Crate, as an engineman and as a supervisor, I want to ask you some questions about the training of enginemen. If a fireman had, say, only experience on passenger diesels and he came from the shop as a wiper and had gone as a fireman on passenger diesels; had completed his A book and his mechanical examination, whatever would be required, how long -- which would of course take three years -- how long would it take, in your opinion, for that fireman to be qualified to operate a yard diesel?

A With a man who has had three years experience firing and has written his A book, and passed his mechanical examination but has never run a yard engine, I would say two shifts in the

yard with an experienced engineer and he could qualify to operate a yard engine.

Q Now, in making that answer I want you to assume that there is no fireman on that yard diesel. Would that affect your answer or would it not?

A No, it would not.

BY THE CHAIRMAN:

Q You referred to a man who had had three years experience firing. What do you mean by that?

A Three years experience as a fireman or diesel helper.

Q In what kind of service?

A Passenger service.

Q In what kind of service?

A Diesel service.

BY MR. SINCLAIR:

Q Now, take that same man and after he has been an engineman in the yard and you want to put him out on the road as a freight engineer and assume that his training as a fireman and on the yard diesel, there is just the other members of the head end crew, that is the engineman and the head trainman -- now, in your opinion what would it take to qualify that man who had been a diesel passenger fireman and then had gone into the yard as an engineman and now we want to qualify him as a road freight diesel engineman; how long would it take, in your opinion?

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A. From my own experience I would say 3,000 miles to learn the characteristics of the road.

BY HON.MR.McLAURIN:

Q Three thousand student miles?

A Correct.

Q Where he would not have the responsibility of running the engine but there would be another engineman there?

A Correct.

BY MR. SINCLAIR:

Q Now, Mr.Crate, based on your experience around the railway in your various capacities as fireman, engineman, rules instructor and supervisor ---

THE CHAIRMAN: Would you just hold that question for a moment, Mr.Sinclair? I would like to ask a question arising out of the last one.

BY THE CHAIRMAN:

Q Putting the last question to you another way: Supposing that there had been no helpers on diesel engines for a number of years and the road was pretty well dieselized. Where would you get your diesel engineers?

A We would get our diesel engineers -- we are always going to have passenger firemen and the passenger firemen would be promoted to spare engineers who in turn would be promoted to regular engineers and as the passenger firemen moved up through their promotions we would have the training ground to replace naturally the passenger engineers

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because there are going to have to be some spare firemen and a training ground to replace the spare firemen.

Q What do you mean by a "training ground"?

A We could put them in diesel shops which in my idea would be the best training ground, prepare them on the rules.

Q Then go from there where?

A As spare firemen as their promotions came along, identically the same as we do today. They would step up to passenger assignments and then they would step into yard and then into freight.

BY MR. SINCLAIR:

Q Mr.Crate, based on your experience on the Canadian Pacific in your capacities as a fireman, as an engineman, as a rules instructor and as a supervisor what effect, if any, would there be in your opinion on operations if firemen-helpers or whatever you wish to call them were removed from yard and freight diesels?

A On yard I can see no difficulty.

Q Taking yard separately, you see no difficulty. What is your opinion as to the effect on safety, if any, in yard?

A Absolutely none or I would not make this statement.

Q All right, on the road, what would be the effect?

A The effect on the road on through freight trains I can see no difference than a passenger train with a third man in the cab.

J.F.Crate

Q What would the effect of the removal of the fireman or helper from the freight diesels be, in your view on safety?

A I believe it would be a move for the better.

Q Why, Mr. Crate?

A When you have two men with the same responsibility on one side of the cab there would be a tendency for one to rely on the other. I only have one man on the right side. Why should I have two men doing the very same job? That is my observation.

BY HON. MR. McLAURIN:

Q You said through freights. What about way freights?

A Way freights and switching jobs we will have to change our method of operation as I mentioned earlier in as much as you will not, if you take the firemen off -- with one man setting cars off there will be no fireman to relay the signals to. Therefore, we are going to have to take the detention ^{and} ~~or~~ wait to allow three men to come up and make the switching movement.

Q But you say it could be done with the proper deployment of the crew?

A That is my observation on the territory which I have covered.

BY MR. SINCLAIR:

Q You said wait for three men to come up?

A I mean for the two men to perform the switching, move those two men to come up from the rear.

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J.F.Crate

MR. SINCLAIR: Please answer my friend.

MR. LEWIS: Mr.Chairman, I would hope to get through with my cross-examination if we extend the morning sitting beyond 12.30 if that were convenient

BY MR. L EWIS:

Q I was interested to know, Mr.Crate, if you had not been there when this train had to be cut and doubled because of the failure of an engine in your last trip observation would the conductor have done the same thing you did, namely use the telephone and get in touch with the despatcher?

A I would say definitely, Mr.Lewis. That is his responsibility.

Q Would he go back to the van, take the telephone and get the same protection that you got?

A Not only that. That is one of the most important things, Mr. Lewis. It is going to speed up the train; otherwise, he would have had to go out flagging himself and another reason for putting the phone up which is his responsibility is to advise the dispatcher of the train being in difficulty.

MR. LEWIS: May I say to the witness and to the Commission, Mr.Chairman, I had no doubt the conductor would have done it. I just wanted to have it on the record that that is what he would have done.

BY MR.LEWIS:

Q I was also interested on page 16 of your exhibit 126, of your observations, to find out, Mr.Crate, where the engineer got the

information which you put on form M.P. 74?

A Did you say 16, Mr. Lewis?

Q Yes, page 16.

A Well, what information are you referring to?

Q Well, he booked certain things on form M.P. 74 and said:

"Examine unit and all water and oil levels. Put window in frame of fireman's windshield."

Did he obtain the information from someone else or did he have it all himself?

A Prior to the departure of these units from North Bay this had been booked by the engineer bringing the engine into North Bay.

Q You mean he merely repeated the same thing?

A That is right and he got his information, the fireman, he had gone back on the occasions that are mentioned there and he had observed that they were still leaking.

Q So that he got the information from the fireman with respect to both units or with respect to unit 4420 only?

A Well, he got it -- naturally he went out himself when we stopped at Mattawa for train inspection. They both inspected the unit and it was discussed what was wrong with it. The cylinders were still leaking.

Q The fireman had reported that to the engineer and he went out to see?

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- A That is correct. The engineer was also out at Mattawa to find out for himself.
- Q On page 14 you said in answer to a question of Mr. Sinclair's and you used the words "at that particular point" you could have gone with the one unit if the other one had conked out completely. I was wondering why you said "at that particular point"?
- A At that particular point, Mr. Lewis there is no extreme grade where it would slow the train with that particular tonnage. I may say there that train is 1,000 tons light on that subdivision.
- Q 1,000 tons light for one unit or for two units?
- A For two units and there was no extremely heavy grade. He could have gone to a siding with the one unit and got into ^{clear} ~~clearance~~.
- Q Was there a down grade or simply a not heavy up grade?
- A No, it was a fairly tangent track.
- Q How did you keep track or did you keep count of the time it took the trainman to make his running inspection of the train?
- A I timed them -- not on all occasions, I took my watch out to start with and glanced at it and on the average it would be 30 seconds.
- Q And the entries on one and two when you did not ride the engine of 30 seconds in each case, was that your average or the engineer's average?
- A That was my average, Mr. Lewis.
- Q From basing it on your other experiences?

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A No, I was in a position with that number of cars from the rear of the train to observe the men exchanging signals.

Q After they had finished the inspection you mean?

A When they turn around and look out they would give the rear a highball.

Q And when they finish they also give that highball?

A When they give the highball to the rear the rear end knows that everything is all right on the front and with six cars you can plainly see them. On a 75-car train it would be a little different.

Q I am not questioning your statement. This is a new point to me and perhaps to the Commission. Do they signal to each other when they start the inspection or when they finish the inspection?

A When they start. It only takes a matter of seconds to look around to see that everything looks all right on your train.

Q If it is six cars?

A That is right.

Q And when they are finished looking they signal?

A They signal, that is when they give a highball which means that everything is okay as far as they can see and telling the fellow at the rear "Everything is all right as far as I can see".

Q Have you had occasion, Mr.Crate, to travel for pleasure or any other reasons on other divisions or subdivisions of the railway than

J.F.Crate

those on which you have made those observations?

A On business I have, Mr.Lewis.

Q And is there anything particularly abnormal about the curvature in your division and the subdivision that you indicate in Exhibit 126?

A I have seen them worse.

Q Pardon?

A I have seen worse curvature than on the Sudbury division.

Q Where roughly can you recall are there worse curvatures?

A Well, I would say on the Schreiber division there is more curvature there than on the Sudbury.

Q Any others, any other parts of the country that you have travelled in?

A Not to my knowledge, Mr. Lewis. I have rode to Chalk River, Trenton, Havelock.

Q That would all be in Ontario, your experience?

A That is right, Mr.Lewis.

Q And you say you have seen worse particularly on the Schreiber division?

A I would say the Schreiber division is worse than the Sudbury.

Q There is just one point. You have observed that the rear end and the head end trainmen change off half way through their trips, or at some point or other during the trip. Is that pretty general in the Ontario District?

A The Ontario District? I have never worked the Ontario District, if you are referring to that.

Q I always forget these names.

A You mean Sudbury.

Q I mean in the province of Ontario.

Q In the places I have worked, yes, that is the general practice.

Q Does seniority have anything to do with it at all?

A Yes, it does.

Q The junior man is usually at the head end?

A It all depends on the senior man. As a general rule he figures he has a little preference and maybe he will want to ride the head end on his homeward trip so he can be, so he won't have so far to walk.

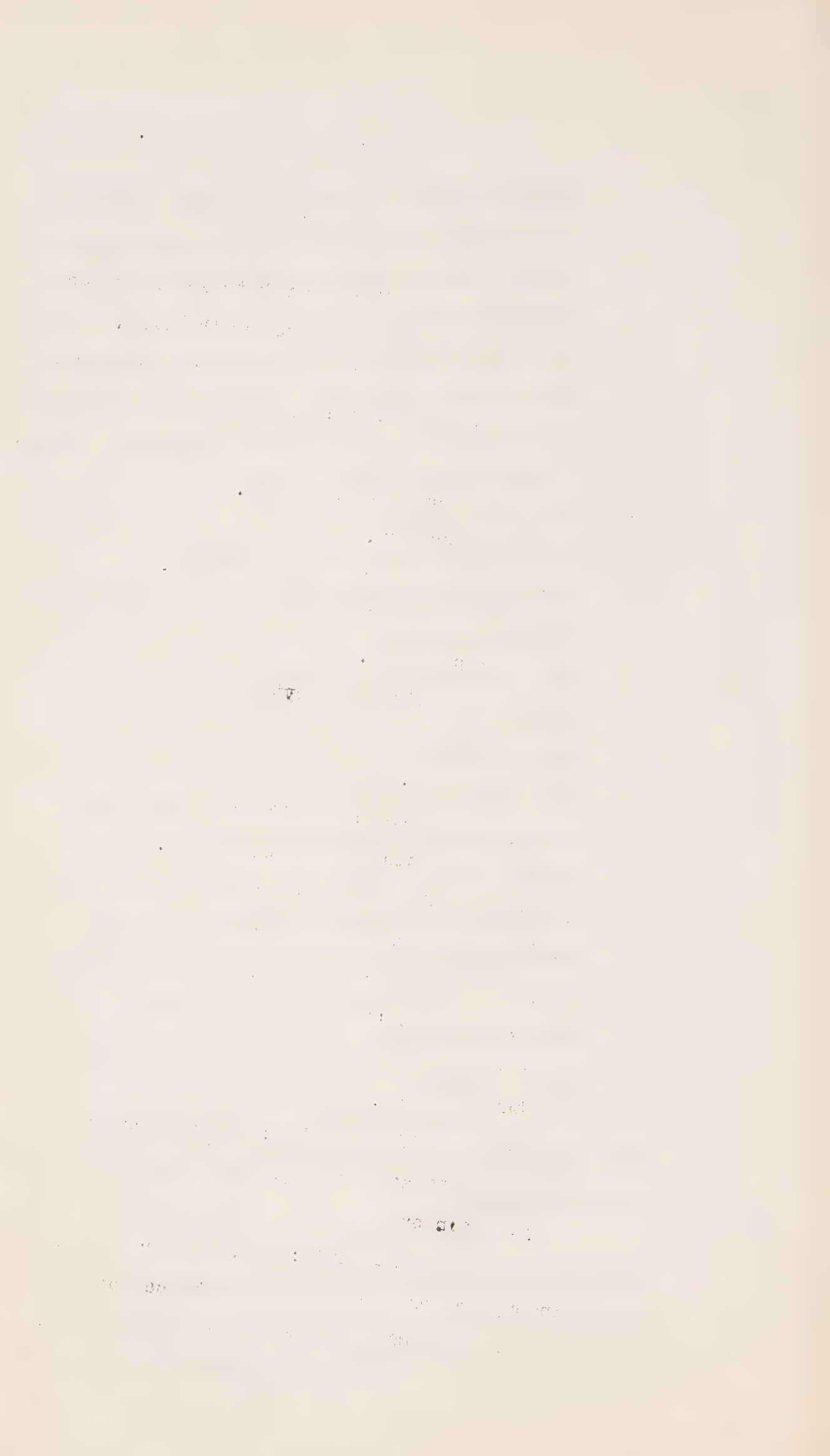
Q When he gets out?

A That is right.

THE CHAIRMAN: Is this an interchange of seats as between the fireman and the head end trainman?

MR. LEWIS: No, between the two trainmen; the one comes up from the caboose to the engine and the other one walks back to the van.

THE CHAIRMAN: I misunderstood that.



BY MR. LEWIS:

Q For part of the trip?

A That is right.

Q That is so, is it not, Mr. Crate?

A That is right.

Q That has been your experience?

A That is right.

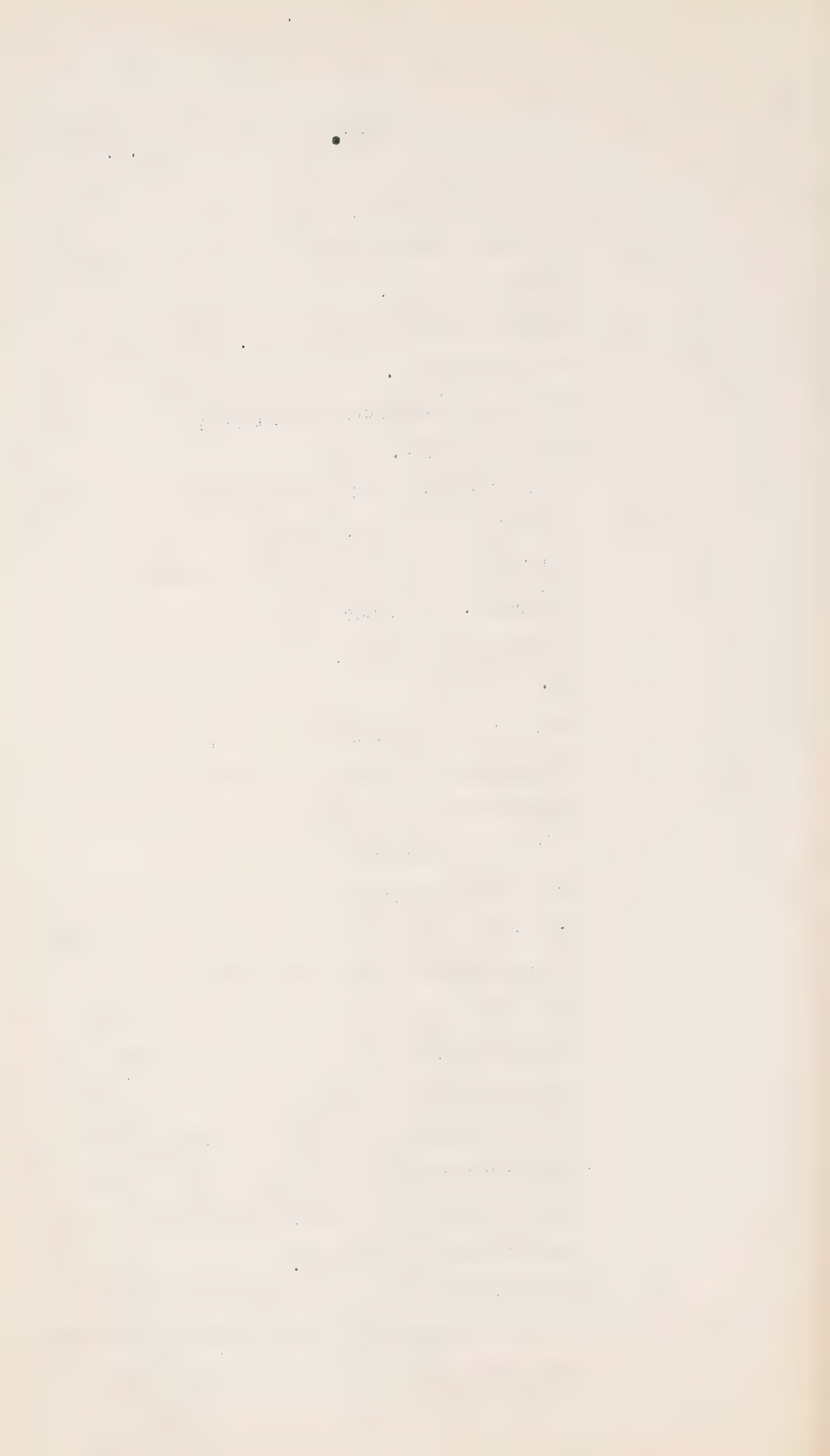
Q I am instructed that in other parts of the country it does not seem to be the habit, does not seem to be quite as general or as frequent. I do not suppose you would know anything about that?

A No.

Q But, in any case, would you agree that the trainman during his probationary period, during the first six months, is not likely to be in the caboose at all?

A No, I would not go so far as to say that, Mr. Lewis, because I have seen a great number of new trainmen, as I have new firemen. I will admit that for the first few trips a new trainman is generally on the engine. As I said previously, the conductor is in charge of the train and it varies as between the instructions of the conductor, but I cannot recall seeing a new trainman on the head end for six consecutive months.

Q What you are saying is that the head end, is that he would be on the head end for some time; that for some time within his first



six months, maybe less than six months, he will change with the rear end **trainman**; would that be a fair statement?

A Yes; it could be maybe two weeks.

Q You gave the Commission a statement of the training which you give trainmen when you hire them, just how you go about it, and so on; how you send a man to the repair track to teach him how to apply hand brakes, how to change a brass and several other things. Then I have a note of your saying that something was introduced not so long ago. What was introduced not so long ago?

A This sending of the men to the repair track for education on how to change a brass. That relieves the conductor of some responsibility.

Q How long ago did you introduce this?

A I would say, on our territory, about two years ago.

Q About two years ago. These four or five control trips that he gets, student control trips; how long has it been four or five?

A Always, to my knowledge; sometimes more if the report is not too good from the conductor. The conductor will put on good, very good, poor, needs more experience. Then we force him to make some more.

Q That has always been the minimum, you say, all over your entire territory?

A That is correct.

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Q That is correct?

A That is correct. That is the minimum.

Q You have had experience as an engineer on diesels on the road, but you said it was limited to about 25 round trips in freight service?

A That is correct.

Q What kind of freights would it be, all kinds, through and way freights?

A We do not run diesels on through freights, or on way freights, pardon me; it was chiefly on through freights.

Q Both symbol and express, I suppose?

A Very few express, symbol freights.

Q You said something about at that time the fireman had a duty to perform on the diesel, make out some sort of form?

A That is correct.

Q He had the duty of inspecting the engine and making reports on what he found, was that it?

A That is right.

Q That continued until you issued your bulletin, when, last October?

A Somewhere around there.

Q You had continued right up to that time?

A Yes, to my knowledge, yes.

Q You issued the bulletins in your territory, I suppose, as a result of instructions from headquarters at Montreal, or wherever you got your instructions from?

A The Superintendent at that time issued the bulletins, yes.

Q He was ill then and you were Assistant Superintendent?

A That is right.

Q That bulletin cancelled the observations that the fireman was to make; it told him he had no longer any responsibility for patrolling?

A Correct.

Q Would you not say that the switching responsibilities of the trainman are equal with his lookout responsibilities?

A They are all part of it.

Q Pardon?

A They are all part of it.

Q All equally part of it?

A All part of it, Mr. Lewis.

Q When you say, therefore, that the major responsibility of the head end trainman is lookout, that is not quite a correct statement, is it?

A That is a correct statement. I thought I had made that quite clear, Mr. Lewis. You have also brought up the matter that the young man is put on the head end of the engine, is not that right?

MR. LEWIS: Yes, that is perhaps a question.

MR. SINCLAIR: You asked for it.

THE WITNESS: When he is on the

head end of a locomotive there could be a train stopped or there could be a train running ahead of him that is running under circumstances where it could be overtaken. In either occasion there could be a red fusee if the train running ahead was running under circumstances in which it is liable to be overtaken. The responsibility there would be to drop off fusees at the required intervals. Would it not be important? It is part of Rule 99. Would it not be important to instruct the head end trainman, "You have to look for this." It is part of Rule 99.

J.F.Crate

BY MR. LEWIS:

Q I am asking you, Mr.Crate. Do you put this new trainman on the head end, on the engine, and I suppose one of the purposes is that he is in a better position to learn the road; is that right?

A That is right.

Q The reporter cannot read your nod.

A I do not put him there, the conductor puts him there.

Q When I say "you" I mean the railway.
The conductor puts him there because that is where he can learn the road best?

A That is correct.

Q Much better than in the caboose.

A That is correct.

Q What you are saying is that in order for him to learn the road he has to keep a lookout or he won't learn anything.

A That is right.

Q I am suggesting to you that as a duty of the head end trainman switching and flagging and running inspections are all equally part of his duties, just as much as maintaining a lookout; is not that right?

A They are part of his duties.

Q Just as much as the lookout; is not that right?

A Yes. But you have to stress the importance for protection.

Q You stress the importance --

J.F.Crate

A Of train movements, what you have to look for, and the importance of maintaining a proper lookout.

Q And I quite understand that. When you were a fireman did you ever have occasion to alert the engineer about something which averted an accident or an affair?

A Not to my recollection, Mr. Lewis.

Q You never had occasion to do that yourself? How many years were you a fireman, Mr.Crate.

MR. SINCLAIR: You are shaking your head again. Your answer to that question was "No"?

THE WITNESS: I said not to my recollection.

BY MR. LEWIS:

Q How many years were you a fireman?

A From 1926 to 1931, for five years; 1937 three or four months; five years and four months; 1939 to 1946.

Q Roughly?

A Eleven years.

Q Ten or eleven years?

A That is correct.

Q And you do not recall any occasion when you alerted the engineer about anything?

A Not that would result in any mishap, no.

Q You mean you did alert him about things, but you cannot recall that it averted any mishaps; is that it?

A I cannot recall ever having to alert the

J.F.Crate

engineman, to be quite frank with you.

Q You do not?

A No.

Q As an engineer do you recall your fireman ever alerting you about anything?

A No.

Q You do not recall anything about that either?

A No. If there was anything outstanding after all these years, you always, no matter how long ago it happened to be, can recall something that would be outstanding. I cannot think of one single instance in either case.

Q Is it likely that it was such a routine matter that it just would not be outstanding for that reason; is that likely?

A I cannot recall in either instance where I would alert an engineman or where a fireman alerted me when I was an engineman.

Q I am looking through my notes and there was an occasion where you said that at the Sudbury yard there were nine crews around the clock, which would mean three crews on each shift.

A That is correct.

Q You must say "yes" because the reporter cannot hear your nod.

A Yes.

Q You said that in your experience these signals were always given to the engineer directly in that yard.

A With the exception of one occasion.

Q With the exception of one occasion.

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A That is right.

Q That occasion you say happened five months ago?

A Approximatetly five months ago.

Q There was a rough coupling?

A Correct.

Q Do you know of any occasion when there was a rough coupling when the signals were given to the engineer?

A Yes I do.

Q Rough couplings are not unusual affairs, are they?

A I would not say that they are prevalent by any means.

Q But they happen.

A They have happened.

BY HON. MR.MCLAURIN:

Q Is it rough or heavy, or both?

A We call it both.

MR. LEWIS: I think they use both terms; at least I have heard both terms.

HON.MR.McLAURIN: I am all for getting all the jargon I can.

MR. LEWIS: They have used both terms to me.

BY MR. LEWIS:

Q My final point, Mr. Crate. You are Acting Superintendent of the Sudbury Division.

Q Correct.

Q How many passenger firemen do you have in your division?

J.F.Crate

A I have 21, Mr.Lewis.

Q How many passenger engineers?

A Twenty.

Q Twenty-one firemen. Is that both spare and regular?

A No, they are all regular.

Q When they are passenger they are all regular, is that it?

A Correct. That is the number of regular men to cover the regular assignments on the entire division.

Q How many engineers do you have in freight service in your division?

A Sixty-three.

Q Does that include both regular and spare?

A That includes all way freights, road switcher assignments, pool freight and spare.

Q How many engineers do you have in yard service in your Sudbury division?

A Twenty-four.

Q. That also includes the spare board?

A. The regular men.

Q. Is there any yard spare board?

A. Pardon me, I made an error. You asked me how many freight engineers I had.

Q. How many engineers, yes?

A. And I said 63, which includes through freight, way freight, road switchers and spare.

Q. That is what you said?

A. Did I mention spare?

Q. I think you did.

A. I did not think I did.

Q. You said you had 24 in the yard?

A. That is correct.

Q. Would that include the spare?

A. No.

Q. If you added your spare, what would the total be?

A. I have already added those.

Q. The total would be 63?

A. To ~~make~~ it a little more explicit for you, we will take North Bay for example, where we have a pool freight list - that is, regular pool freight list. There we have nine assigned yards. Now, there would be a spare list we will say of 10 men who would take

any vacancies in passenger, any vacancy in pool freight or any vacancy in yard.

Q. What you are saying in fact is, you have one spare board?

A. Which covers all regular assignments.

Q. So, you have a total of 87 engineers in freight and yard, and a total of 21 firemen in passenger, in your division?

A. That is correct.

Q. And you are suggesting that the 21-passenger fireman, if there were no firemen in freight or yard, would be a sufficient pool for your division to fill the engineer requirements as you go along?

A. Yes, quite definitely.

Q. Why are you so definite?

A. I have five men going out this year; I would still have all my engineers, would I not?

Q. Do not ask questions of me; just explain.

A. I would still have all my engineers; I would still have my spare engineer list; I would still have 21 passenger firemen.

Q. You say you have five engineers going off this year?

A. I have five going off. Therefore, I would have only 16 passenger firemen.

It would be necessary to maintain a spare firemen list to relieve the 21 firemen. Therefore, those firemen who are on the spare list would move up into the regular passenger service, and it is my responsibility as Acting Superintendent to see that there are sufficient men trained to move on up to the spare list.

Q. You would increase your fireman spare list, would you, because you only have one on your spare list now for passenger? What is your answer?

A. No. The fireman spare list works identical with the engineer's spare list.

Q. Assuming there are no yard or freight firemen, I am asking you whether if that were the case you would have to increase the number of spare firemen available for passenger service in order to increase your pool of firemen for promotion to engineers?

A. That is correct.

Q. That is what I thought you meant.

MR. SINCLAIR: Thank you Mr. Chairman.

THE CHAIRMAN: Any re-examination?

MR. SINCLAIR: No re-examination.

THE CHAIRMAN: What about this afternoon?

(Discussion as to plane accommodation out of Ottawa).

MR. SINCLAIR: Mr. Chairman, time and dates are pressing on me, in view of the long adjournment over Easter; I can understand the reason for it. If it would not inconvenience the Commission, I could call another witness this afternoon.

THE CHAIRMAN: I am only dealing with today, but it would seem that we would not have more than a half hour this afternoon. Can you make use of that time?

MR. SINCLAIR: If it is not going to inconvenience anybody, my answer is that I can make use of it.

THE CHAIRMAN: Next week we will commence our sitting at 10 o'clock.

MR. SINCLAIR: In that case, I will not press for a sitting this afternoon.

THE CHAIRMAN: You may be in the same situation next Friday afternoon.

MR. SINCLAIR: I will meet next Friday when it comes, sir.

--- The Commission adjourned
at 1 p.m. until Monday, April 8, 1957
at 10 a.m.

ROYAL COMMISSION ON EMPLOYMENT OF FIREMEN
ON DIESEL LOCOMOTIVES IN FREIGHT AND YARD
SERVICE ON THE CANADIAN PACIFIC RAILWAY

24

PROCEEDINGS

DATE: April 8, 1957

PLACE: Ottawa, Ont.

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SHORTHAND REPORTER
241 MANOR AVENUE
ROCKCLIFFE PARK
OTTAWA, CANADA

Chairman

I N D E X

Witnesses

YOUNGS, John James
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Exhibits

No. 127 - Records of trips, 1954,
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128 - Observations by Mr. Youngs,
30 pages 3106

ROYAL COMMISSION ON EMPLOYMENT OF
FIREMEN ON DIESEL LOCOMOTIVES IN
FREIGHT AND YARD SERVICE ON THE
CANADIAN PACIFIC RAILWAY

Proceedings of public
hearing held at Ottawa,
Ontario, Monday, April
8, 1957

PRESENT:

Hon. R.L. Kellock,	Chairman
Hon. C.C. McLaurin,	Member
Hon. Jean Martineau,	Member
Douglas M. Fraser,	Secretary
A.R. Winship,	Asst. Secretary

APPEARANCES:

D.W. Mundell, Q.C. C.J.A. Hughes, Q.C.	Representing the Commission
I.D. Sinclair, Allan Findlay	Representing the Canadian Pacific Railway Company
David Lewis,	Representing the Brotherhood of Locomotive Firemen and Enginemen

Monday,
April 8, 1957.

24th DAY

MORNING SESSION

--- The Commission resumed at 10.00 a.m.

JOHN JAMES YOUNGS, sworn,

EXAMINED BY MR. SINCLAIR:

Q. You entered the service of the Canadian Pacific in April, 1927 as an engine house labourer at Lambton, Ontario, and later in the same year you became a bank fireman at Lambton in July, 1928.

MR. LEWIS: What is that?

BY MR. SINCLAIR:

Q. What is a bank fireman?

A. In terms of the railway and shop it is a lighter-up, that is he lights the locomotives up before they go out.

Q. In July, 1928 you became a spare fireman on the Ontario District and ran as a spare fireman until 1931, when you were laid off on account of the depression. You were absent from railway service until March, 1941 working outside the railway industry, and working for a part of that period as foreman for the Marine Department, terminal warehouse, at Toronto. You return to Canadian Pacific service in March, 1941 and ran as spare fireman on the Ontario District until June, 1943. Then in June, 1943 you became a regular fireman in pool freight service on the Ontario District and held that position until June, 1945?

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In June, 1945 you were set up as a locomotive engineer. From June, 1945 to July 1947 you ran as a spare engineer and as a fireman when you were not holding a run as an engineer. That was on the Ontario District, is that correct?

A. That is correct.

Q. In July, 1947 you held a position as a regular engineer on pool freight service, also working the spare board as engineer on the Ontario District. You continued there until March, 1949.

In 1949 for a period of four months you were Acting Road Foreman of Engines on the Ontario District. After that you returned as a regular engineer on the Ontario District until the commencement of 1950.

In the beginning of 1950 until early that year, again for a period of about three or four months, you were Acting Road Foreman of Engines. In April, 1950 you returned to your work as regular engineer on the Ontario District and you acted in that capacity for one year until March, 1951, at which time you were set up as Road Foreman of Engines for the Quebec District, having headquarters at Montreal; is that correct?

A. That is correct.

BY THE CHAIRMAN:

Q. And you still remain in that position?

BY MR. SINCLAIR:

Q. That is your present position, Road Foreman of Engines, Quebec District?

A. Yes sir.

Q. Mr. Youngs, you are a member of the Brotherhood of Locomotive Engineers?

A. That is correct.

Q. And before that were you a member of the Fireman's Brotherhood?

A. Yes sir.

Q. Did you hold any office in that Brotherhood?

A. Yes, I was local organizer for a while and also Chairman of the Board of Trustees, that is the Audit Committee.

Q. Chairman of the Audit Committee and organizer for a while. You have taken a number of special courses having to do with diesel locomotives?

A. Yes sir.

Q. In September, 1949, you were for one week each month at the Montreal Locomotive Works observing the construction of diesel locomotives; is that correct?

A. Correct.

Q. In February, 1950 you took a two-week's course at LaGrange, Illinois, at the General Motors diesel plant?

A. That is correct.

Q. In April, 1952 you spent two weeks at Schnectady, New York at the Alco Works, the American Locomotive Company where they manufacture Alco locomotives?

A. Yes sir.

Q. In June, 1953 you spent two weeks at Wilmington, Delaware taking a locomotive air brake course?

A. That is correct.

Q. During a number of years in the late 40's for one month each year you had leave of absence because you were an instructor in mechanical matters for the International Correspondence Schools, and you did that work for about four or five years for one month each year?

A. That is correct.

Q. Does that cover your work with the company in the various activities you have had in matters now before this Commission?

A. Yes sir.

Q. Now, Mr. Youngs, as fireman what territories did you work?

A. On the Ontario District.

Q. What?

A. That covers Toronto, London and for a short while at Smiths Falls.

Q. Did you run as a fireman in yards at any time?

A. Yes sir.

Q. Did you run on the various subdivisions of the Ontario District?

A. Yes.

Q. Both branch and main lines?

A. Yes sir.

Q. For instance, MacTier?

A. Yes.

Q. Orangeville?

A. Yes.

Q. Owen Sound?

A. Yes.

Q. Teeswater?

A. Yes.

Q. Trenton?

A. Yes.

Q. Hamilton?

A. Yes.

Q. Havelock?

A. Yes.

Q. According to your record, I notice that prior to the depression when work was slack in Ontario you moved out to Kenora, is that right?

A. That is correct.

MR. LEWIS: May I ask if the Ontario District covers the province of Ontario?

MR. SINCLAIR: No.

MR. LEWIS: It covers a part of the province?

MR. SINCLAIR: The Ontario District does not take in the North Shore of Lake Superior, which is the Algoma District, where Mr. Crate was, nor does it take in Smiths Falls, which is part of the Quebec District. Sudbury and MacTier west to Fort William are in the Algoma District. Smiths Falls, east of Smiths Falls is in the Quebec District. The balance of the province of Ontario is the Ontario District.

BY MR. SINCLAIR:

Q. Is that correct?

A. That is correct. From Smiths Falls, Windsor and Toronto, MacTier and Toronto to Hamilton and Owen Sound.

Q. That is the Ontario District?

A. That is the Ontario District.

Q. On what territories would you run as locomotive engineer?

A. Out of Toronto, the MacTier Subdivision, Galt Subdivision, Owen Sound, Teeswater, Hamilton, Havelock, Trenton and St. Thomas.

Q. Now, on what territories or subdivisions have you worked as Road Foreman of Engines, either in your capacity as Acting Foreman or permanent Road Foreman of Engines, which you have been since March, 1951?

A. The Galt Subdivision, Windsor, Havelock, Trenton, Winchester; and for the Quebec

District, from Montreal to St. John,
New Brunswick.

Q. In your capacity as Road Foreman of
Engines have you handled any special
power on the Canadian Pacific?

A. I was on the demonstrators when they first
came out, and I have handled all the
different types and makes of diesel
power that has been manufactured.

Q. And run on the Canadian Pacific?

A. That is right.

Q. Have you instructed on steam engines,
Mr. Youngs?

A. I had to go out and instruct men on
steam engines.

Q. Have you instructed on Budd cars?

A. Yes sir.

Q. What are your duties as Road Foreman
of Engines?

A. First, to ride the locomotives and in-
struct the engineer on the appurtenances
and operation of the equipment and the
safety devices and train handling and
so on.

Q. As Road Foreman of Engines do you or do
you not qualify or O.K. or pass an
engineman for diesel service?

A. Yes sir.

Q. Do you instruct firemen on diesels?

A. When they ask me any questions I give

them all the information I can, when they ask me for it. As far as giving instructions, I instruct them on the steam generator.

Q. When you are instructing the engineer do you or do you not cover the steam generator with him?

A. Yes sir.

Q. With the engineman?

A. Yes sir.

Q. You cover the steam generator with him as well as with the fireman?

A. As well as with the fireman, yes sir.

Q. Is that in accordance with your instructions?

A. That is correct.

Q. Is it or is it not?

A. Yes, it is. I instruct the engineer because there might be a time when he might get a young fellow out who said he was O.K. for steam generator and he is not and it is up to the engineer to make sure the steam keeps going, so he must know about it.

Q. In your work as Road Foreman of Engineers do you travel very many miles a year?

A. Quite a number.

Q. On diesels?

A. Yes sir.

Q. You do?

A. Quite a number of them.

Q. Do you keep a record of your trips?

A. Yes, every trip that I am on the road as Road Foreman there is a trip report put in for every trip every day. When I am relieving the Master Mechanic I notify the Division Officers that I am working at that time as Master Mechanic, the Superintendent on the Laurentian Subdivision, and telling him where I will be. That is kept on record every day, where I am.

Q. What do you mean, when you are relieving the Master Mechanic?

A. There are three Master Mechanics I relieve while they are on vacation every year.

Q. In your trips as Road Foreman if irregularities occur do you note them or do you not?

A. Yes sir, I make a note of them; I report them when I get in.

Q. If a protective device does not work or an alarm is sounded, do you make a note of that?

A. Yes sir, I make a note of that so it can be reported when I return to the terminal.

MR. SINCLAIR: As Exhibit 127, Mr. Chairman, I should like to file three sheets making up statements for the years 1954, 1955 and 1956 showing the miles put in on diesel units and diesel locomotives by Mr. Youngs,

showing the month, miles.

EXHIBIT NO. 127: Record of trips,
1954, 1955, 1956
by Mr. Youngs.

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BY MR. SINCLAIR:

Q That is Exhibit 127, Mr. Youngs. Would you mark that as Exhibit 127, please? Looking at Exhibit 127 would you please comment on that, Mr. Youngs?

A That is for the year 1954?

Q Yes.

A That takes in the mileage exactly travelled on diesel engines, that is, regardless of steam and RDC covered.

Q There is no RDC mileage here?

A No, sir.

Q I notice this table for the months in the year 1954 shows 48,954 miles, the number of alarms are seven and it says "Exclusive of boilers." What do you mean by that?

A That means I did not count the alarms in this from boilers such as a hot stack or something like that.

Q What do you call "boilers"?

A That is your steam generator.

Q So that "boilers" means steam generators?

A Yes.

THE CHAIRMAN: What does RDC miles mean?

MR. SINCLAIR: Rail diesel cars. That is Budd cars, sir.

BY MR. SINCLAIR:

Q They are not included in here?

A No, sir, they are not included.

Q And it shows here the average miles per alarm 6,993. Then, the second sheet of Exhibit 127 is for the year 1955 and it has similar information, is that correct?

A That is correct.

Q And shows the average mileage per alarm as 4,850 -- correct?

A That is correct.

Q And the third sheet of Exhibit 127 is for the year 1956 where you put in 37,499 miles and seven alarms and the average miles per alarm 5,357 -- is that correct?

A That is correct.

Q Looking back at this exhibit, Mr. Youngs --

HON. MR. MARTINEAU: Before you put that question, will you have the witness explain to me what does ground relay mean?

BY MR. SINCLAIR:

Q What is a ground relay, Mr. Youngs?

A Well, a ground relay is any break in the circuit that will cause the power to ground to the frame of the locomotive.

BY HON. MR. MARTINEAU:

Q For whatever cause? .

A Well, it could be on account of any kind of cause. It could be the insulation was off the wires and the naked wire touched another part of the frame or

caused it to short.

BY MR. SINCLAIR:

Q Hot engine, I think that speaks for itself. Then, what is a low lube?

A Low lubricating oil pressure. When the pressure drops below the setting of the lowest valve and it will drop the power ~~over~~^{off} the locomotive. By the time that it gets below 17 pounds it drops off.

Q There is another one there for August in 1954 -- defective wheel slip relay. That is on the first page of Exhibit 127-- a defective wheel slip relay.

A That was a relay that had defective fingers, in other words, the metal had weakened and it was renewed.

BY THE CHAIRMAN:

Q I suppose that ground relay on page 1 and ground relay trip on page 3 is the same thing?

A The same thing, yes, sir.

BY MR. SINCLAIR:

Q Now, looking at this exhibit I notice on page 1 two alarms in January, none in February, one in March, none in April, one in May, one in June, none in July, one in August, none in September, one in October and none in November or December. The most in any month that year were two, Mr. Youngs?

A That is correct.

Q And on the next sheet I notice none in January, three in February of 1955, none in March, none in April, one in May, one in June, none in July -- none in July and August. Your mileage is down in July. Would that be when you would be relieving?

A Yes, sir, that would be when I was relieving.

Q And in September would you be on your holidays or something there?

A That is correct.

Q And one in October, November and December in each month.

In 1956, January none, two in February, March one. That was an engine overspeed. I think the Commission earlier were told what that was. I do not think there is any dispute about it. It is where the engine has too much electricity to get down into the traction motors and it is a protective device to protect the engine itself. There is none in April, two in May, one in June, July none, in 1,965 miles, August 111 miles and you have a hot engine on one of those trips, September relatively small mileage, October also, and November, and you have got back into your regular swing in December. Why would your mileage be

small during the summer months?

A The Master Mechanics take a month's holiday and I was relieving them and I was also up here on the court last year.

Q The conciliation board hearings?

A Yes, sir. I might also add too that the majority of these ground relays were in February and were on account of the snow in some cases getting into the traction motors and water causing the ground relay.

Q Well then, what about June? I notice June 1955, that would be for some other cars? Cause.

A That was ^{another} ~~on other~~ cars, pigtails loose and dropped off.

Q Does water get into the machinery causing ground relays?

A Yes, sir, it does.

MR. SINCLAIR: Now, as Exhibit 128, Mr. Chairman, I would like to file a record of trip reports made by Mr. Youngs recently in February and March of this year, 1957. There are 30 pages, numbered 1 through 30.

EXHIBIT No. 128 -- Trip record,
30 pages,
on various
divisions by
witness.

BY MR. SINCLAIR:

Q Exhibit 128, Mr. Youngs, would you mark

that, please, the entire exhibit being 128? Looking at the first sheet of Exhibit 128, Mr. Youngs, I notice that this trip was made on February 1 -- pardon me, before I ask you about specific ones; on these observations, Mr. Youngs, where did you ride?

A In the cab of the locomotive.

Q Any exceptions to that would you please tell the Commission of it when you come to the actual observation?

A Yes.

Q Now, the first trip is car body units, an A and a B. It is a freight train, 64 cars, 3,000-odd tons, and that is from St. Luc to Smith's Falls. Under the first heading "Alarms" I read:

"Unit 4403, hot engine alarm at mileage 58 shutters stuck closed, same put on manual by fireman. Unit 4007 low lube oil alarm at mileage 75. Fireman held flashlight while I adjusted by-pass regulating valve kept going with one unit for several miles."

Just before we leave that, Mr. Youngs, what caused the hot engine alarm on unit 4403?

A I think that was the contactor sticking on the control switch. During the inspection at St. Luc I was going around

the locomotive with the engineer and I was talking about the protective devices and the alarms and I asked him if he had forgotten how to set up in case of a hot engine, to manually set his adjustment. I moved the switch over from automatic to manual and we went through the procedure of taking care of the locomotive. When I put the switch back evidently I put it back too far or exerted too much force on it and it being a cold night as we left St. Luc the shutter did not actuate because the contact was broken. I realized afterwards when we got the hot engine alarm that I should have taken a second look at that switch and made sure the contact was made.

Q That is the hot engine on 4403. On unit 4007 --

BY THE CHAIRMAN:

Q Before you leave that, where is that switch?

A It is on the control panel back on the side wall of the locomotive on the left-hand side.

Q In the cab?

A No, sir, back in the engineroom.

Q Which was the leading unit?

A 4007.

BY MR. SINCLAIR:

Q On the low lube alarm on 4007 you say here you adjusted the by-pass regulating valve. Now, Mr. Youngs, can a fireman do that kind of work in your opinion?

A Well, I don't think he can because he has never been instructed how to do it.

Q Could the engineman?

A No, none of us instructed him to do it. There is a locking pin inside and there is a cap over it. As far as the engineman and fireman are concerned I don't know that anybody has ever instructed them about how to take the cap off and take the locking pin out and adjust it.

Q How did you know how to do it?

A I was taught that in Schenectady.

Q Anything further on this thing? The third heading "Details of duties" --

"Fireman went back through units at Vaudreuil while stopped for red block -- one minute 40 seconds, mileage 41 one minute three seconds, mileage 63 one minute three seconds, mileage 75 one minute three seconds."

He went back, I take it, at mileage 41?

A That is correct.

Q Mileage 63?

A Yes.

Q And mileage 75?

A Yes.

Q That one you say five minutes out of the cab to adjust lube oil regulator. That was when he went back with you?

A Yes, that is when he went back with me.

Q Then "Looked to rear of train six times during trip." That is running inspection?

A Running inspection, yes.

Q Now, I notice some comments on the MP-74:
"Engineer completed MP-74 booked shutters and low lube oil alarm."

A That is correct.

Q By the engineman or the fireman?

A By the engineman.

Q And "Made inspection of units before going to booking-in office". Who did?

A That was the engineer. The engineer walked around the locomotive.

Q On the ground?

A With his flashlight on the ground.

Q Did he go back into the engineroom?

A No, not that time, he got out of the cab and walked around the locomotive and put his flashlight onto the running gear underneath to make sure everything was O.K.

Q Now, No. 2, here is an A and B car body type, 74 cars, 3,290 tons, Smith's Falls to Chalk River. Anything in particular you wish to draw to the attention of

the Commission on this trip, Mr. Youngs?
Is it all down here?

A It is all down here what happened. The engineer changed places with the fireman at mileage 67.5, the fireman was a classed man and had been set up as an engineer and they just changed places.

THE CHAIRMAN: What is involved in checking the fuel?

BY MR. SINCLAIR:

Q At mileage 4, check fuel and lube oil pressure?

A That was to check the pressures. The engineer just walked in the back to see that the pressures were what he figured would be O.K.

Q Did the engineer ask the fireman to go back?

A Yes, he told him to go back.

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BY THE CHAIRMAN:

Q What is involved in that? How do you check the fuel?

A There is a gauge on the control panel that gives you the rate of fuel oil pressure, lube oil pressure, turbo pressure.

BY MR. MUNDELL:

Q Does that apply to the inspection at mileage 4 or mileage 36?

A At each time he told him to go back; he just takes a walk back to see if the pressures were O.K. He takes a walk around and comes back and says it is O.K.

BY THE CHAIRMAN:

Q Is that usual or unusual, in your experience?

A Right now it is unusual because there has been a bulletin and instructions put out that the firemen are working under the jurisdiction of the engineer. A lot of engineers don't bother sending them back. But when we first got diesel locomotives it used to be the regular practice to go back for the first couple of years.

Q What do you say as to the necessity for it?

A There isn't any necessity of it, because if the fuel oil pressure got low it would shut the engine down, and if the lube oil pressure got low the alarm bell would ring.

Q Supposing when the fireman went back there on instructions from the engineer, he

reported back that the gauge was not normal, that the pressure was low or something of that kind what would or could the engineer have done?

A He couldn't have done anything outside of book it when he came in - that is all.

BY MR. SINCLAIR:

Q We come next to Sheet No. 3 of Exhibit 128; this is A unit and B unit, car body type.

THE CHAIRMAN: The same as on the previous sheet?

MR. SINCLAIR: Yes sir, the same units.

BY MR. SINCLAIR:

Q This is from Chalk River to Smith Falls - the opposite direction. Under the heading, "Details of Duties Performed by Firemen Enroute" I notice that the fireman was out of the cab four times, and it goes on to say:

"While in the siding at Haley's to clear train 557 and No. 2 I told firemen to give the flagging kit to the brakeman who had got off of unit to signal engineer ahead on train 557 so that he could pull rear of train clear of signal. Looked back ten times, thirty to forty seconds."

That is, the fireman looked back ten times for thirty or forty seconds?

A That is correct.

Q What is your comment, Mr. Youngs, about your

asking the fireman to give the flagging kit to the brakeman?

A The reason I asked the fireman to hand the brakeman the flagging kit was that I knew that 557 had a meet there in that siding with the No. 2. The 1261 on 557 was throwing quite a lot of steam; as a matter of fact, the engineer couldn't see past the engine for steam, and as an added precaution I asked the fireman to tell the brakeman to light a fuze, in case No. 2 came down before we got him into the siding.

Q And did it?

A Yes, it did.

Q Did No. 2 come down before you got 557 into the siding?

A No sir. It wasn't necessary to light a fuze. I told the engineer to keep pulling up, and when he got close enough to our engine I gave him the signal to stop. And his rear end was in the clear, with a green aspect in the block signal. No. 2 came along and identified himself, and went through.

Q Now turning to sheet 4: Road switcher on lead unit, and B unit trailing, making up a two-unit consist locomotive.

THE CHAIRMAN: What is 8453?

MR. SINCLAIR: That is the road switcher, sir; 4408 is the B unit.

BY MR. SINCLAIR:

Q This is a freight train of 46 cars. Is there anything unusual here, Mr. Youngs, that you wish to draw to the attention of the commission, or is it all set out?

A I think it is all set out here.

Q Sheet No. 5 of Exhibit 128; I think this is the same units as in sheet 4, only it is on a different run. It is a freight train with 79 cars. Under the heading "Details of Duties Performed by Firemen" you say:

"Firemen took signals from rear brakeman after pulling into siding at Yamachiche to cut crossing 65 cars from engine when clearing train 352. This not necessary as normal practice under such circumstances is for westward trains to stand by east of crossing, then pull through siding on arrival train 352."
Under "Form MP-74" you say:

"Engineer signed MP-74. Booked air flow indicator sticking."

What is that?

A That is the indicator that indicates with a hand and a light when the brake-flow has been reduced in the train lines.

Q Where is it?

A Facing the engineer, on the engineer's panel.

Q That is on the engineer's panel?

A Yes.

Q Sheet No. 6: Single road switcher on pick-up train, 35 cars. Under "Details of Duties Performed by Fireman Enroute" you say:

"Relayed signals at Shawinigan Falls while setting off 22 cars. Brakeman de-trained at switch. Engine on curve. Signal given to fireman to back up, conductor and rear brakeman at station. Looked back five times for a period of thirty to forty seconds."

Mr. Youngs, in these various observations when you set out the time, how did you take these times?

A Sometimes with a stop watch and sometimes with a regular standard watch - most of the times with a stop watch.

Q Under "Additional Comments" you say:

"Signals relayed through fireman while switching in C.P. yard, to save brakeman walking. Signals given to engineer while switching in papermill yard. Switch stands on engineer's side."

What do you mean by the first sentence, what yard?

A That is the yard at Grandmere.

Q You say, to save the brakeman walking- to save what brakeman and where?

A When setting off cars they are taking in, they run around the train, set off the

van, set off cars to be taken in to the mill, and switch them on our left-hand side; they throw the switch and give the signal, instead of walking over the track and giving the signal direct to the engineer.

Q That is what that first sentence means?

A That is what it means.

Q Sheet No. 7. The same unit, a road switcher, 42 cars, 1928 tons, from Grandmere to Three Rivers. Under "Details of Duty Berformed by Fireman Enroute" you say:

"Fireman operated engine to Shawinigan Falls. While lifting cars at Shawinigan Falls signals given on fireman's side because engine operated cab first Grandmere to Three Rivers. Signals could be given direct to engineer if engine turned at Grandmere."

What has been the practice as to turning the engines at Grandmere?

(2)

A The practice with steam engines is they turn them so that going up they are headed west, and coming back they are headed east.

Q What has been the practice?

A The practice with steam engines is to turn steam engines, but the practice with diesels is they never bother to turn them.

Q How long does it take to turn an engine?

A About ten or fifteen minutes - turn a couple of hoses, and turn the engine around -

about ten minutes.

Q And "additional comments" you say:

"Engineer and fireman stated that it is over two years since they had a hot engine alarm. The only time a ground relay alarm occurred was when the engine was left too close to the shop. Rainwater got into the traction motors."

Now Sheet No. 8: that is an A and a B unit, car body type, freight train, 58 cars. Under "Alarms and Defects" you say:

"Ground relay at mileage 85. Reset switch myself. No more trouble experienced."

A That was on the second unit.

Q By the way, why did you reset it yourself, Mr. Youngs?

A I noticed the amperage dropping off the forward unit.

Q Will you speak a little more slowly, Mr. Youngs. You said you noticed the amperage fall off?

A We noticed the power drop off; the lead unit was taking all the load. We knew there was something wrong with the trailing unit. I went back to see what was wrong and that is when I noticed that alarm bell on the rear unit was ringing, and we had a ground relay.

Q Was the alarm ringing in the leading cab?

A Not on that.

Q Why?

A There was a defective wire between the jumpers, between the two units.

Q You say, a defective wire between the jumpers, between the two units?

A Yes.

Q I think the rest of that sheet speaks for itself. Now Sheet No. 9: this is a yard switching diesel locomotive, 6552, on a wayfreight, four cars... and a crew of how many?

A A crew of five

Q Under "Details of Duties Performed by Fireman Enroute" you say:

"Helped to unload wayfreight at Jasper and Bellamy. Relayed signals while switching Brockville yard. Checked rear of train three times for a period of twenty seconds."

Under "Additional Comments" you say:

"It was not necessary to relay signals if trainmen had positioned themselves properly on engineers side."
I notice that that is quite a long trip - from 8:15 a.m. to 9:25. The next sheet, No. 10, has the same engine, 6552, coming back, the same crew. It does not leave until 6:35 in the evening. What did this mean, looking at Sheets 9 and 10?

A When we arrived at Brockville at 9:25 we switched Brockville yard around by the

station, that is the C.N., and then we proceeded over to the Phillips Brass Foundry and switched there for a while; we picked up some oil cars, and went down I think to the Esso Oil plant, down on the riverside, spotted a car there, and we waited until they unloaded the car. After the car was unloaded we proceeded up to the back of the station, kicked a car off; and from there we proceeded down to the freight shed and waited for them to load freight at the freight shed until around between five and six o'clock.

Q How long were you waiting there?

A Between $2\frac{1}{2}$ and 3 hours, sitting waiting.

Q That move has been explained; you have covered No. 10; No. 10 covers also the movement back from Brockville to Smiths Falls, hauling six cars.

A That is right.

Q Sheet No. 11: Road switchers, 8639 and 8640, pulling 82 cars, 4637 tons from Smiths Falls to St. Luc, Montreal. You state under "Details of Duties Performed by Fireman Enroute":

"Looked back to rear of train on engineer's side two times, on fireman's side five times for a period of thirty to forty seconds. Blew down main reservoirs at Monklands while making

"train inspection."

Under "Additional Comments" you say:

"Fireman relayed signals from switch tender at St. Luc. This not necessary as brakeman was on the engineer's side at all times while units backing up to shop track."

What do you mean by that?

A I didn't understand right at the time why the fireman was yelling and calling signals to the engineer when he had the brakeman on his side at all times, right at the back of the unit giving him signals; in other words, he was duplicating the signals from the brakeman.

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- Q. Was the brakeman outside?
- A. Yes sir, on the steps where the engineer could see him.
- Q. On what signals was the engineer operating?
- A. He was taking the brakeman's signals, naturally, because he could see him.
- Q. Pardon?
- A. The brakeman's, because he could see him.
- Q. No. 12. This is an A and B unit, car body type, from St. Luc to Labelle, on the Laurentian division. Is there anything here? I notice under "Additional comments" this was the engineer's first trip on the main line on this type of power. What do you mean by "this type of power"?
- A. This is the first time he had been on the main line on a diesel engine -- a diesel locomotive.
- Q. Yes. What is the practice when a man goes out like that, Mr. Youngs? Was this an experienced engineer or wasn't it?
- A. Yes, he had been running on the spare board on freight on steam engines.
- Q. Was he okayed on diesels or wasn't he?
- A. No sir.
- Q. Is that why you were there?
- A. That is the reason I was with him.
- Q. Did he run the engine all the way or did you?

- A. He ran it part of the way and I ran it part of the way. I ran it demonstrating how to do the braking -- how to brake it in the hills in Ste. Agathe -- and after while he took it and brought it into Labelle.
- Q. No. 13. You have the same engineman coming back with the same unit. Down under the heading, "Details of duties performed by fireman en route," it says, "looked to the rear of train five times for a period of 20 to 30 seconds. Out of cab while meeting train 447 at Val Morin". Under, "Final inspection duties performed by fireman," it says, "Set hand brake". Under "Additional duties" it says, "Not in the cab, ^{Flagging} ~~wagging~~ train 447". Under, "Comments on preparation of form MP-74," it says, "Engineer filled in form, booked sanders to be checked. Bell ringer to be adjusted." Under, "Additional comments," it says, "Fireman out of cab with brakeman to get experience on the proper manner to flag in the event that firemen are removed from the diesels, hopes to be transferred to brakeman's lift." How do you know that?
- A. I asked him why he wanted to go out flagging with the brakeman and that was the answer he gave me.



- Q. No. 14. Here is a ~~Trainmaster~~, --No. 8918. This one speaks pretty much for itself, Mr. Youngs. What is your experience on diesel power in the Quebec district and other places you have run with it in the Ontario district, as to the seating between the brakeman and the fireman?
- A. Invariably the brakeman sits in the ^{front}~~back~~ seat and the fireman sits in the ^{back}~~front~~ seat. In this case the fireman took the front seat and the brakeman took the back seat.
- Q. I notice that you had the same unit going back.
- A. Coming back they just changed over automatically. About half-way over the road the brakeman looked back and got out of his seat and got a drink and the fireman got out of his seat and got a drink and instead of getting back into their own seats they changed seats. There were no remarks passed; it just seemed that everybody went.
- Q. That is the only point I wanted to cover on Nos. 14 and 15 of Exhibit 128, except that on No. 15 under, "Additional comments" I find the words, "Made train inspection at ^{Berthier}~~Benthier~~ and met train 356. Engineer looked to rear of train seven times, assured head brakeman that everything was in order". Did the brakeman go over on the right-hand side for the running inspection?



- A. Yes, a couple of times, but the other times the engineer looked back and saw everything was okay and put up his hand and said, "Everything is okay," and the brakeman did not bother to go over and have a look.
- Q. No. 16. This is a P-2, is that right, Mr. Youngs?
- A. That is correct.
- Q. A stoker?
- A. Yes.
- Q. P-2 stoker-fired steam engine, 37 cars, 1,914 tons, from Farnham to Sherbrooke and Megantic. Under the heading, "Preparatory duties performed by fireman," it says, "Checked flagging equipment, tested water glass mount~~ains~~ains and try cocks, examined fire box. ~~Checked~~ the water in the tank and coal supply. Ash pans. Built up fire while on the shop track and tested stoker." Under, "Details of duties performed by fireman, it says, "Looked to rear of train five times between Farnham and Sherbrooke. Took water at Foster. Over 35 per cent of the time while running his attention was on the stoker, steam gauge and blowing down the boiler, testing water glass and try cocks to see that they were free of scale." Under, "Additional duties" I read, "Engine 2604, Sherbrooke to Megantic. This engine used to double head 5459 at Sherbrooke but they put 2604 as an

assisting engine.

A. Yes sir.

Q. That is a G-2?

A. That is correct.

Q. Was it the lead unit of the two steam engines?

A. Yes, from Sherbrooke to Megantic.

Q. Yes, and who was in the cab?

A. Engineer Carson, and fireman Dillon and myself and the brakeman.

Q. The brakeman came off 5459 and moved to the lead unit 2604?

A. Yes sir, that is correct.

Q. This is a hand-fired engine?

A. Yes.

Q. What did you note as to the time the fireman was on the deck looking after his various duties on this hand-fired engine over the trip?

A. He was a cracker-jack of a good fireman. I had out my stop-watch checking the amount of fires he put in and how he put them in. 58 per cent of his time was spent on the deck.

Q. In making these estimates, Mr. Youngs, did you have any assistance from the other members of the crew?

A. In this particular case I was talking to Carson between stations. I checked the time between stations. He had his time bill out and

was checking his watch with me. I had a double check from the time it took from ~~Lennoxville~~ to Racey. I double-checked the time.

BY MR. LEWIS:

Q. Who is Carson?

A. The engineer.

BY MR. SINCLAIR:

Q. He is the engineer on 2604? You had a double check on what?

A. On the time it took us to go from point to point. I was also checking the amount of times he put in a fire and the amount of scoops he put in.

Q. You were making this check for what purpose?

A. To see for my own satisfaction and the satisfaction of anyone who wanted to know, how much time a man spent on the deck of a cab on a hand-fired engine with good coal and good steaming locomotive.

MR. LEWIS: I notice that the witness has notes which differ from those before us. These are the notes from which he gave the information about 2604. Perhaps the witness ought to explain what those notes are.

MR. SINCLAIR: Engine 2604 is a G--

THE CHAIRMAN: What are you reading?

MR. SINCLAIR: I am reading from the notes he has.

BY MR. SINCLAIR:

Q. Are these the notes you have of this movement?

A. They were made at the time. They were made at the time I made up this. I had it in my mind to write them out but I did not.

Q. Your notes say that G-2 is a hand-fired engine.

"The trip we had it it was steaming well and good coal. The fireman was experienced and a good fireman. With the help of the engineman on the time with the stop-watch, the time the fireman was on the deck when we were moving over the road, it worked out at 58 per cent."

BY MR. LEWIS:

Q. You made that note at the time?

A. Yes, I made that note at the time.

BY MR. SINCLAIR:

Q. No. 17. Here we have a P-2. It is the same -- no, it is a different one. It is a P-2, stoker-fired?

MR. LEWIS: I am sorry to be a little slow, Mr. Chairman, but may I ask that that note be filed, please?

THE CHAIRMAN: That note can be appended to page 16 of the same exhibit.

MR. SINCLAIR: Yes sir.

THE CHAIRMAN: Now proceed with page

BY MR. SINCLAIR:

Q. 5456 is a P-2 stoker-fired, Mr. Youngs?

A. Yes sir.

Q. Under the heading, "Details of duties performed by fireman," it says, "Looked to rear of train seven times, took water at Sherbrooke. Blew down the boiler every 20 miles. Tested water glass mountains and blew out try cocks, called all order boards. Over 30 per cent of his time was taken checking stoker and boiler appliances". That is 30 per cent of what time?

A. The time occupied while he was running.

Q. Engine 2609. This is a G-2, hand-fired engine. Under, "Details of duties performed by fireman" it says, "Maintained steam pressure, took water at Calumet. At no time was it necessary to give signals on fireman's side." This is a wayfreight, 15 cars. Under, "Additional comments," it says, "Fireman took between 50 to 60 seconds for each fire, from Ste. Therese to Ste. Augustine, nine fires in 19 minutes. From Lachute to Grenville, ten fires in 24 minutes. From Calumet to Plaisance, 15 fires in 47 minutes".

Q Contd

That is a light train. What is your estimate as to the time the fireman was on the deck of that hand-fired engine while moving over the road?

A. It would be a little less than 50 per cent because he would be stopped backing up at the station and banking the fire at the station and building up his fire at the station.

Q. The next is page 19, Unit 8452. Pages 19, 20, 21 and 22 of these observations all deal with the same unit which was making moves on the Laurentian Division from Labelle to Mont Laurier, that is pages 19 and 20, and then the next page shows the same moves from Labelle to Mont Laurier and then back from Mont Laurier to Labelle. This is a road switcher 8452. I notice you say under "Additional comments":

"Used this unit to train
engineer on operation and alarms".

Is that part of your regular work when you are on the road?

A. Yes sir.

Q. This is a pick-up train, a way freight from Labelle to Mont Laurier. Coming back from Mont Laurier to Labelle it is used as a pick-up, and the same with the next two trips. Throughout these

trips -- I notice on page 19:

"No signals given on
fireman's side during trip."

You mention the same thing on page 20;
the same thing for page 21; the same
thing for page 22. Then page 23 is
again a road switcher, the same unit,
from Labelle to St. Luc, 11 cars. You
say:

"Fireman relayed signals
several times at St. Jerome, while
switching; not necessary if train
crew had positioned themselves
properly."

Then down below you say:

"This was engineer's first
trip on this type of power".

Were you or were you not training him?

A. Yes sir.

Q. Then page 24, this is a single A Unit,
car body type pulling 38 cars from St.
Luc to Gatineau. Under "Details of
duties performed by fireman en route"
you say:

"Out of cab three times for
a period of one minute each time,
to check booster and lube oil
pressures, when unit on hardest
grades and throttle in No. 8.
Instructed to go back by engineer.

"Looked back to rear of train
five times for a period of
20 to 30 seconds."

Then under "Additional comments" you say:

"At no time was it
necessary --"

Before we go on to that, Mr. Youngs; from
your experience and in your opinion is it
necessary for the booster and lube oil
pressures to be checked when the throttle
is in No. 8 position?

A. No. If there is any dropping off in
power the engineer would be able to
tell it on his ammeter gauge.

Q. If there is a drop off, when you have
a single unit or even when you have a
multiple unit, what can the fireman do?

A. He cannot do anything.

MR. LEWIS: I did not hear that
answer.

THE WITNESS: I said he cannot do
anything, not if there is a drop-off in power.

HON. MR. MARTINEAU: If you keep on
talking that fast we will have to install
a low-speed device.

BY MR. SINCLAIR:

Q. Under "Additional comments" you say:

"At no time was it necessary
for fireman to relay signals, as
front end brakeman in clear view

"of engineer while setting off
trains and turning unit."

Then the next page covers the same unit
on the move from Gatineau to St. Luc.
It speaks for itself. That is page 25.
Under "Comments on preparation of Form
MP-74" you say:

"Fuel pump cut out on No. 3."

Does that refer to No. 3 cylinder?

A. That is No. 3 cylinder, yes.

Q. When was that fuel pump cut out?

A. That was cut out on the shop track at
St. Luc.

Q. It was cut out on the shop track at St.
Luc, by whom?

A. By the maintenance force.

Q. Before the engine left the shop track?

A. Yes.

Q. Would that affect the functioning of the
locomotive, to cut out a unit?

A. No sir.

Q. A cylinder?

A. No, it does not.

Q. How many cylinders are there on this
type of engine?

A. Twelve.

Q. Was that an Alco or G.M.?

A. An Alco.

Q. Do you know how many cylinders there are
on the G.M.?

A. Yes.

Q. How many?

A. Sixteen on some.

Q. Page 26 covers Unit 4027, car body type A Unit. Under "Details of duties performed by fireman en route" you say:

"Out of cab two times to put jar of soup to warm on engine. Relayed three signals at St. Agathe while putting train in No. 3 siding and turning engine to return to St. Jerome. Relayed three signals at St. Jerome while turning engine."

Then under "Additional comments" you say:

"Was not necessary to give signals on fireman's side if rearend trainman had come up the train and conductor had stayed with van, and turned main line switch."

Then page 27. This again is a single A Unit, car body type. Under "Details of duties performed by fireman en route" you say:

"Looked back to rear of train ten times for a period of 20 to 30 seconds. Out of cab to put jar of tea to warm on engine block. Relayed two signals at St. Therese because train crew did not position

"themselves properly on engineman's side."

Is there anything on Page 27?

A. No, that covers it all.

Q. Page 28 is another single A Unit, car body type. Is there anything particular on page 28 you wish to draw to the attention of the Commission? Is it all set out there?

A. It is all there.

Q. This was a freight train of 73 cars running from St. Luc to Three Rivers and I noticed that it made the trip in five hours and 15 minutes.

Page 29 is a road switcher in the lead with a B Unit coupled, making a two-unit consist of locomotive.

Under "Details of duties performed by fireman en route" you say:

"Looked to rear of train ten times. Called all signals. Out of cab two times when making train inspection at Monklands and coming into Smiths Falls."

What kind of signals do you refer to?

A. Order boards, block signals.

Q. Then under "Additional comments" you say:

"Engines run through, changed crews on main line in front of

"station. Engineer set up brake
and removed reverse handle."

What did the fireman do when he got off
the engine?

A. Just took his lunch pail and got off
the engine when we arrived there.

Q. Page 30 is a road switcher and "Details
of duties performed by fireman en route"
you say:

"Looked back to rear of train
twelve times; called all signals
and order boards. Out of cab
checking units while making train
inspection at Monklands."

Then under "Additional comments" you say:

"These units sanded and fuelled,
switched to out-going track and
despatched on train 906 south."

Is that after you arrived at?

A. At St. Luc.

Q. Who was that done by?

A. The locomotive foreman was waiting for
us on the shop track and as soon as
we arrived he took charge of the loco-
motive.

Q. And what did the engineer and fireman do?

A. Both the engineer and fireman and myself
got out of the cab and went into the
office.

Q. Now, Mr. Youngs, when diesels were first

introduced on the Canadian Pacific,
when was that?

A. 1949.

Q. You mentioned earlier that you had had
certain demonstrators?

A. That is correct. We had three units from
Chicago, Illinois, brought over and tested
and run on the Eastern Lines and then sent
west.

Q. Who was running them on the Eastern Lines?

A. ~~Three~~ ^{The} locomotive engineers out of different
terminals. I went with them and we had
several instructors in the cab, that is
several maintenance instruction men who
were sent from Chicago.

Q. After you got these demonstrators and the
company was getting its own diesel power,
how did you go about training enginemen
on this new diesel power?

A. Well, we rode a thousand miles with each
man as he came off steam. We went back
with him before we Okayed him to run alone.

BY THE CHAIRMAN:

Q. I could not get that answer at all.

A. I said we rode with each man a thousand
miles before we Okayed him to go alone.
There was another road foreman and I by
the name of Charlie Wright from the
Ontario District at that time.

BY MR. SINCLAIR:

Q. What points did you cover in your instructions

to qualify an engineman for diesel?

A. We covered the brake, the various cut-out cocks on the automatic brake, the engine control panel, the engine control panel back in the engineroom, the purpose of the isolation switch, the purpose of the different gauges and pressures that build up when the locomotive is started and when it should be running, and the ground relay and the engine over-speed and the brake warning light on the braking grids; the protection for the low lube, the alarm; the hot engine alarm.

Q. On the Alco units, or what are mentioned as the MLW or Alco; on that type of unit is there anything that you draw to the engineman's attention in particular with regard to the low lube warning light?

A. Yes sir. Every time the engine is shut down or every time the engine goes down the low lubricating oil light will always light. The lubricating oil pump^{stops}, just as soon as it stops then your low lube oil light will light up as an indication.

Q. And when you are starting --

A. That the oil pressure is low.

Q. When you are starting up, Mr. Youngs, an Alco Unit, does it or does it not operate like an automobile, that is there

is a light there until the pressure builds up?

A. The light will come on, the low lubricating oil light will come on just as soon as you put your engine control switch to the idle position, and as soon as you put your control switch on and hold it there for a period of time until your lubricating oil pressure builds up to 20 pounds, your alarm bell will quit ringing and the light will go out.

Q. Do you have to take any action at all when that happens?

A. No sir, that is just a normal process.

Q. Normal what? Would you please speak up?

A. Normal process. As soon as the light goes out the bell stops ringing and you just let go of your control switch.

F
Follows

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Q Where is the control switch?

A Some are at the back of the panel, on the body type they are on the side wall. Some are placed on the back of the panel behind the engineer just inside the engineroom and on the road switchers they are placed on a panel in front of the ~~engine~~ ^{engineer} just to his left.

Q Now, while you were giving one of your observations, I think it was No. 1 of Exhibit 128, you were explaining that before a unit started out you were checking the engineman. Is that or is that not normal procedure for checking an engineman about the protective devices?

A Yes, sir, I do that. That is normal procedure.

Q Do you ever check the fireman?

A No, it is the engineer who is responsible.

Q Now, Mr. Youngs, about how many enginemen have you qualified on diesel locomotives?

A Between 200 and 250, maybe more.

THE CHAIRMAN: I think we will recess, Mr. Sinclair.

MR. SINCLAIR: Very well, sir.

---Recess.

BY MR. SINCLAIR:

Q Mr. Youngs, if a man were running as a fireman of diesels and is up for

classification as an engineer, to be qualified as an engineer, what kind of training do you give him?

A Well, a lot depends upon the man, the fireman himself, when he is being set up. In the east, down here I ride with them when they are firemen and let them change off with the engineer and I observe how they operate the train and if I see that they operate the train O.K. I will qualify them as soon as they are set ~~out~~ ^{up} to go right out on the main line.

Q Now, going back to your experience as a fireman, were you a hand-fired fireman?

A Yes, sir.

Q On various classes of power?

A That is correct, yes.

Q Generally what classes did you hand-fire?

A Well, we had 3700's, the 2200-class of engine --

Q G-2's?

A D-10's, we had the P-1's --

Q 2500's?

A Yes, G-2's,

Q 3300's?

A When I first started in Toronto there were a few of them around. They used them on the assisting jobs between Toronto and Guelph junction.

Q That has been referred to as the Mother

Hubbard type. Did you call them that?

A No, I didn't know them as that at all.

Q What did you call them? Well, never mind.

A Well, I was a young fellow just starting. I didn't have any idea of names then.

Q How did you find the job of hand-firing a steam locomotive?

A Some trips it was pretty hard. Another trip it would not be too hard, depending on the coal.

BY THE CHAIRMAN:

Q Mr. Youngs, you have a habit of making your first statement loud and dropping the second. Could you keep them both up?

A Yes, sir.

BY MR. SINCLAIR:

Q For instance, on a normal trip, take the MacTier subdivision, about how much coal would you shovel?

A Depending on the type of train we have we would shovel anywhere between 10 and 12 tons of coal.

Q And how many hours would that be?

A Coming down from MacTier on some trips you go up from eight to nine hours and another trip it will take you twelve hours.

Q Were you ever a passenger fireman?

A Yes, sir.

Q At MacTier?

- A On the MacTier subdivision, Trenton subdivision --
- Q On the MacTier how long would you take to make the trip over the MacTier in passenger service?
- A Three to four hours.
- Q And with a hand-fired engine how much coal would you shovel in that period?
- A Four to six tons, sometimes a little more, sometimes less -- not much less, though.
- Q Based on your experience in hand-firing freight engines; what is your estimate of the amount of time you would be on the deck looking after your fire and shoveling coal and other work of that nature?
- A Around 60 to 70 per cent of the time.
- Q What was the practice when you were running as to the seating between yourself and the head trainman on the left-hand side of hand-fired power?
- A The head trainman always sat ahead of the fireman.
- Q Have you been a stoker fireman?
- A Yes, sir.
- Q On P-2's, P-1's?
- A Yes.
- Q G-5's?
- A Yes.
- Q Any other classes -- H-1's?
- A H-1's and K-1's.

Q 3100's?

A Yes, the 3100.

Q Did you have much experience as a stoker-fireman, Mr. Youngs?

A Yes, sir, quite a bit.

Q On a freight train with a stoker-fired steam-engine were you or were you not ever required to supplement the stoker with hand-firing?

A Yes, I have had to do that.

Q Was it usual to have to require supplementation of the stoker?

A That would depend on the coal. A light kind of coal would not get back into the back corners, so you would have to supplement the corners shovelling to keep filling your back corners up.

Q What kind of power would that be on?

A 53's and 51's, P-1's and P-2's also, and 1200's. I have had to do it on them too.

Q What about an H-1, Hudson class locomotive, if it was assigned to freight?

A Yes, with a standard stoker you quite often had to get down and supplement the coal in the back portion of the grate.

Q You say it depends on the coal?

A That is right.

Q Based on your experience, what percentage of the trips if you had tonnage

trains or heavy trains even if not right up to tonnage, would you be supplementing at some time over the trip?

A Oh, anywhere from 15 to 20 per cent of the time, sometimes 30 per cent.

Q Fifteen to 20 per cent and sometimes 30 per cent?

A Yes.

Q Now, over-all on freight service, on stoker power what is your estimate of the amount of time the fireman would be required to give attention to his stoker and other work that would take him down to the deck or require attention?

A On an over-all average basis I would say 25 to 30 per cent of his time would be taken by observing the flow of coal, putting in supplement to supplement his fire and blowing out his boiler and checking the steam pressure -- between 25 per cent and 30 per cent.

Q That is freight service. Now, what time in passenger service would he be required to be looking after his firing duties when he was moving between stations, based on your experience?

A That is taking trip for trip or just one --

Q Just give me the range or average?

A Well, I would say 15 to 20 per cent of

the time on an over-all range of time.
One trip you will gain and another trip
you will have to be down on the deck
slicing it off the distributing plate.
Another trip you get a good bunch of
coal and everything would go fine.
You would only be on the deck maybe
10 per cent of your time.

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BY THE CHAIRMAN:

Q. On a stoker-fired engine where did the fireman and trainman sit?

A. The fireman sat in front where he would have access to and control over his jet valves, water-pump and so on; and the brakeman sat behind.

THE CHAIRMAN: Mr. Sinclair, it would convenience me if you would make out an exhibit with the engine numbers and models on it. Sometimes we hear an engine given by its number and sometimes by model. I have difficulty keeping them straight. You might put the diesel engines on the same exhibit.

MR. SINCLAIR: Yes sir.

HON. MR. MARTINEAU: If a photograph of an engine has been filed, you might put the number on that photograph.

MR. SINCLAIR: Yes, I will do that sir.

BY MR. SINCLAIR:

Q. When you were running as a fireman on steam-engines what did you consider your first duty, Mr. Youngs?

A. To produce steam, to maintain steam pressure in the boiler so that the engineer could get over the road.

Q. When you were running as engineer on steam power what did you require of your fireman?

A. Just that, to maintain steam pressure so that I could get the train over the road.



Q. When you were running as an engineer and when you were running as a fireman, was it or was it not the practice of the fireman to call block signals?

A. Yes it was, when he was up on his seat and could see them; of course, when you are down on the deck you couldn't see them, and it was up to the engineer and brakeman.

Q. Would you say anything if they called a green board or a green block?

A. I would repeat, yes.

Q. Before you repeated it, would you not look at the block signal?

A. Not always, no.

BY THE CHAIRMAN:

Q. You are speaking about freight engines, are you?

A. Yes sir.

Q. On passenger engines you just had a crew of two?

A. A crew of two.

Q. And when the fireman was engaged with his engine, the engineer had nobody to exchange visual signals with.

A. That is right, sir. If you were down on the deck trying to maintain the steam pressure, he would call the blocks and you would just answer him.

Q. That is the fireman would answer him?

A. Yes.

BY MR. SINCLAIR:

- Q. If you had a junction signal, that is a junction with another railway, or if you had a signal for a drawbridge, or a train order signal, would the practice be the same or would it be different?
- A. You would try and regulate your firing so so that you would be in a position to see the junction points or train order boards. Sometimes it was possible and sometimes it was not possible.
- Q. In your years, as a fireman and an engineer, Mr. Youngs, what kind of record did you have? Were you in difficulty on any occasion?
- A. Yes, I run through a switch in January, 1948.
- Q. Was that the only time?
- A. The only time I know of.
- Q. Were you running a yard engine then?
- A. Yes sir.
- Q. Where was the switch?
- A. At Scarlett Road, Lambton yard.
- Q. On the right-hand side or left-hand side?
- A. The left-hand side.
- Q. Were you disciplined?
- A. Yes, I got ten demerit marks.
- Q. Was the fireman disciplined too?
- A. No.
- Q. Did you get any other demerit marks when you were running as a fireman or an engine-man?

A. Not while I was running as a fireman or engineman, no.

Q. How would you compare the duties of a fireman on a steam locomotive, either hand-fired or stoker-fired, with the duties of a fireman on a diesel, on freight service, Mr. Youngs?

A. The duties of a fireman on a diesel engine are practically nil to what they were on a hand-fired or a stoker-fired steam engine.

Q. What is his duty now?

A. To do whatever the engineer tells him to do.

Q. Who has the duty of producing power?

A. The diesel engine.

Q. On the road switcher type, Mr. Youngs, coupled in multiples or running singly, is it or is it not possible for the fireman to go back and check?

A. When they are running along?

Q. Yes.

A. Well, it is dangerous to go back over those drawbars, even with a catwalk, if they are going at any speed at all it is still dangerous.

Q. What about going out on the running-board and opening the side doors on a road switcher? What is your view as to that?

A. It is dangerous because the wind will probably take the door and throw you off the side of the catwalk or running-board.

Q. How are those doors opened? Do they vary or do they all open the same way?

A. They vary.

Q. Let us take for instance on the GM, how would the doors open on a road switcher?

A. You have a latch at the top of the door and one at the bottom. My experience is that you put your hand up to open the top one, and as soon as you let go of it to open the bottom one the top one will close on you.

Q. What about the Alco or the MLW, how do they open?

BY THE CHAIRMAN:

Q. Before you leave that, you are saying that those doors should not be opened while the engine is running.

A. While the engine is running, no sir.

Q. Why would anybody want to open the doors under those circumstances?

A. I don't know.

Q. You don't know?

A. No.

BY MR. SINCLAIR:

Q. On the Alco or the MLW type diesel, how would the side doors open?

A. They open by a handle, just a latch.

Q. And the Trainmaster; those are the Fairbank Morse type.

A. They open with a handle.

BY THE CHAIRMAN:

Q. All these types of road switchers, they are not the car body type?

A. No sir.

BY MR. SINCLAIR:

Q. How long were you a fireman or an engineer on a yard engine, Mr. Youngs?

A. When I was on the spare board I had quite a bit of yard work around Toronto.

Q. Was that a period of months or a period of years?

A. Over the period of time when I was on the spare board it would probably be I would go for 15 days and get 12 yard engines and maybe two or three trips on the main line.

Q. In your experience as an engineman, at what speed would you do your switching work in the yard?

A. From four to six miles an hour.

Q. What speed would you do your spotting work in industrial switching?

A. That would depend. In and around freight sheds you had to go very slow because they lined up doors with the freight shed platform.

Q. What about switching in industry?

A. Then we would be very slow.

THE CHAIRMAN: The yard speed, which is defined in the red book, that includes industrial switching and all that sort of thing.

MR. SINCLAIR: It does, yes.

THE CHAIRMAN: Is that the maximum speed, six miles per hour?

MR. SINCLAIR: There is no specified

yard speed in miles per hour in Exhibit 27, sir.

THE CHAIRMAN: I am thinking of the evidence; the evidence so far has been that that is the maximum.

MR. SINCLAIR: That is right, sir.

THE CHAIRMAN: What is the definition again?

MR. SINCLAIR: The definition is on page 9 sir, the last definition:

"A speed that will permit stopping within one-half the range of vision."

BY MR. SINCLAIR:

Q. When you were a yard fireman and a yard engineer, Mr. Youngs, what was your practices to relaying signals from the ground to the engine?

A. The practice was to relay signals direct to the engine - to the engineer.

Q. Were or were there not any exceptions to that?

A. Yes, there were sometimes.

Q. When you ran through this switch you were disciplined for at Scarlett Road, what should you have done?

A. I should have come to a stop when I couldn't see the switch or the switch-points.

THE CHAIRMAN: I did not hear your answer.

THE WITNESS: I should have come to a full stop when I did not see the switch or the switch-points.

BY MR. SINCLAIR:

- Q. When you were a yard fireman in Toronto, Lambton, we have been told that yard engines, that is steam engines, were all hand-fired. Has that been your experience?
- A. They were when I started, yes.
- Q. And are they today?
- A. No, there are quite a number of diesel engines, as far as I know; I have not been up there lately.
- Q. But as far as steam is concerned, have you ever seen a stoker-fired steam engine in the yard?
- A. No.
- Q. When you were a fireman on a steam engine in the yard, or when you were an engineer on a steam engine in the yard, was it or was it not the practice for the fireman to space his firing so that he could be on his seat during switching moves?
- A. Yes, you would space your fire so that you would be around and up on your seat when the movements were being made.
- Q. Are there any exceptions to that?
- A. That would depend on the job, because there were 45 jobs
- Q. I cannot hear you.
- A. It would depend on what job you were on. In and around the industrial plants, naturally they did not like smoke and fumes going in

the windows; therefore, you had to adjust your firing to keep the smoke down to a minimum.

Q. How would you do that?

A. By building up your fire in the yard while you are away from the plant, so that you would have a good bright fire in the fire box when you were around the plant.

Q. Was that your practice?

A. That was the practice, yes.

Q. Based on your experience in the yard, do you know of any location in the yard where the fireman must be used as a signal passer?

A. Not now that we have diesel engines. During the steam days it was necessary. Of course we had to hang on to a number of cars before we could get into the industrial plant on account of complaints about fumes from the engines.

BY MR. LEWIS:

Q. That is fumes from steam engines?

A. Yes, from steam engines.

Q. And I did not catch what you said about hanging on to cars.

A. We had to hang on to a few cars when we were pushing into an industrial plant to pick up industrial cars to pull them out; that is, to keep the steam engine away from the building.

BY MR. SINCLAIR:

Q. On a lead job did you ever work as fireman

or engineer around Lambton?

A. Yes, I worked the big lead.

Q. What was your practice there as to spacing your firing, could you do it or could you not do it?

A. It all depends. Sometimes you would get a heavy draft and pull it down, and you would have to build your fire right up when you were backing up in order to have a full head of steam to push your batch up over the hump.

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Q Mr. Youngs, based on your experience as a fireman, as an engineman, and as a road foreman on engines, in your opinion can or cannot a fireman add to the safety of diesel yard operations?

A No, sir, I cannot see as he can, not if the ground crew are positioned properly.

Q What about the road freight diesel operations?

A The same thing applies with it, if the brakeman is in his proper position.

Q Based on your work as an engineman and as a road foreman, if a fireman had no experience and came up to passenger and ran only in passenger, how long do you think it would be before you could take that fireman and put him out as a yard engineer, assuming that before you made this O.K. that he had passed his A book and written whatever mechanical examinations are required? How long would it take?

A To qualify him for the yard?

Q Yes?

A About a day -- maybe two days -- depending on the man.

Q How long would it take the same man to be qualified to handle freight trains on diesel without any fireman being on the engine?

A Over the territory that he has been running as a passenger fireman, anywhere from two

to three months. That again would depend upon the man himself. Of course you have to take into consideration the characteristics of the road.

BY THE CHAIRMAN:

Q Did you say from one to three months?

A Yes, sir, from one to three months.

Q And in that period ranging from one to three months what would he be doing?

A Running with someone with him pointing out the different places where to brake -- where to put the brake on and when to throttle.

Q You mean a road foreman?

A Yes, or a qualified engineer.

MR. SINCLAIR: I did not hear that.

THE CHAIRMAN: A road foreman or a qualified engineer.

BY THE CHAIRMAN:

Q How many miles would that be?

A It would depend upon the division, sir.

BY MR. SINCLAIR:

Q Can you tell us approximately?

A You take on the Megantic subdivision, it is 178 miles from Montreal -- about 3,000 to 4,000 miles.

Q It would be about three to four thousand miles on that division?

A Yes.

Q And on other divisions about how many miles?

A There is quite a difference.

Q Well, take Winchester?

A Winchester, it would not take so long, because you have pretty well straight tangent track, double track, block signals, and long curves. It would not take so long to train a man there as it would at Megantic.

MR. SINCLAIR: That concludes my questioning for the present time.

MR. LEWIS: Mr. Chairman, I suggest to my friend that if the Commission does not mind, perhaps he would put another witness on and I would cross-examine this one and the other witness after the other has been examined in chief and thus have the evening for some other preparatory work.

MR. SINCLAIR: Very well, Mr. Youngs, you step down and please remain available. It was **now** my intention in view of the information I have been able to give the commission to date and depending on my assessment after Mr. Lewis had cross-examined Mr. Youngs to perhaps now turn to the mechanical part of my case and any other engineman I required I would then deal with by way of rebuttal on specific points that were raised by my friend's evidence.

HON. Mr. McLAURIN: This is our last road witness?

MR. SINCLAIR: Except for these mechanical men who will also deal in part with

the road, yes. I would therefore ask Mr. Woodland if he would mind coming forward.

THE CHAIRMAN: What is the full name of the witness?

MR. SINCLAIR: Mr. Bertram Beech Woodland. I must say that I have not got some of my exhibits for this witness brought down from the hotel but I will procede with him until then.

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BERTRAM BEECH WOODLAND, sworn.

BY MR. SINCLAIR:

Q Mr. Woodland, you entered the service of
of the Canadian Pacific in July, 1930?

A That is correct.

Q Your first position was as axeman with a
survey party. That was from July to the
end of December in the year 1930?

A Yes.

Q And then you went back to school for a
short period and returned to the service
of the company as an electrical apprentice
in 1931 at the ^{Western} ~~western~~ shops in Winnipeg?

A That is correct.

Q During the next seven years you served
your apprenticeship and worked in the
motive power shops at Winnipeg?

A That is right. It was a normal five-years
apprenticeship but during the short time
worked during the depression it took seven
years to complete the necessary number of
days -- 1,465 days.

Q During that period you worked on main-
tenance and overhaul of gas electric cars?

A I did.

Q And on the internal combustion engines
that were sent into the shop for main-
tenance and repair?

A That is correct.

Q From July, 1938, to March, 1943, Mr.

Woodland, you were the electrician at Alyth roundhouse in charge of the maintenance of electrical equipment on all types of locomotives then coming into Alyth?

A That is correct, and also on the maintenance of electrical equipment and facilities at the terminal.

Q At the Alyth terminal?

A Yes, sir.

Q From March 1943 to September 1946 you were the district electrician, that is, being in charge of electrical maintenance of all types on the entire Alberta district?

A That is correct.

Q And during that period you took some special diesel and electrical courses given by the International Correspondence School?

A That is correct.

Q From September 1946 to January 1949 you were the district electrical foreman at Moose Jaw, Saskatchewan, in charge of the electrical maintenance in the Saskatchewan district?

A That is right.



Q. During this period you went to LaGrange and took a special course in diesels?

A. That is right.

Q. At the plant of General Motors?

A. That is right.

Q. Then in January, 1949 and until September, 1955 you were General Inspector of Diesel Equipment for the Prairie and Pacific regions, with your headquarters at Winnipeg?

A. That is right.

Q. You were in charge of the inspection of diesel equipment on the Canadian Pacific running west of Winnipeg right through to the coast?

A. West of Fort William, including Vancouver Island and the Baldwin units on the E. & N. Railway.

Q. From September, 1955 until the present position which you now hold, which is Division Master Mechanic for the Winnipeg Terminals and also for the Portage Division?

A. That is right.

Q. You are Divisional Master Mechanic on two divisions?

A. For the Winnipeg Terminals and the Portage Division.

Q. Now, when the Baldwin Units of road switchers were delivered to the Canadian Pacific did you have any particular work to do with them?

A. Those units were delivered in the very last months of 1948. They had been damaged by frost when they were transferred from the plant of the Baldwin Company. We spent some time getting them ready for service. They were placed in service in mid-January or early February, 1949.

I ^{rode} ~~read~~ the original freight tests and passenger tests during which time tonnage ratings were established. We had no standard maintenance regulations and I assisted in formulating the maintenance regulations for this type of power.

I assisted in the instruction of the enginemen and I spent periods of from three to four weeks at one time on the Island when we were engaged in dealing with different problems as they arose in the operation and maintenance of these locomotives.

Q. This was the first introduction of diesel power in Western Canada for railroad operation?

A. It was the first road locomotives we had had in Western Canada, yes.

Q. Before you went on -- you told the Commission earlier this morning that you were over to LaGrange, if I remember, for instructions on the G.M.

units. Did you ever go to Schnectady to get instructions on the Alco or M.L.W. Units?

A. Very shortly after the Baldwin units were put into service a special arrangement was made for me to attend the Alco school at Schnectady, which I did in I think March of 1949.

Q. Then the program of dieselization of the road moved on and it became the policy to consider introducing more road diesel locomotives, and this was around 1950-51, I think?

A. General Motors provided the Canadian Pacific Railway with three units of demonstrator locomotives, I think in 1950. They worked on the Eastern Region and later we ran winter tests in the mountains between Calgary and Revelstoke in January, February and March of 1950.

Q. Those were test runs?

A. Those tests were used to determine whether or not a diesel locomotive could be efficiently applied in the mountains. I accompanied that locomotive on all its trips over some considerable period. I was responsible. There were General Motors maintenance and operating instructors

on the locomotive but I was the liaison man between them and the Canadian Pacific. I was officially responsible as far as the Canadian Pacific was concerned for the maintenance of those units while they were undergoing those tests.

Q. Later on in 1950, in accordance with your duties and being in charge of the inspection of diesel equipment on the Western Lines, did you make any special trips or do any special observation work elsewhere than with the Canadian Pacific?

A. When it became apparent that diesel locomotives were going to be applied in the West I accompanied Mr. E.G. Bowie, Superintendent of Motive Power, on a fact-finding mission for the President, Mr. Mather, to determine just what type of problem had been encountered in the United States northwestern sections in the railroad operation of diesels.

Q. When was this?

A. This was in 1951, was it not? We rode the Northern Pacific and the Great Northern Railroads, riding the locomotives. We observed their maintenance practices at the various shops they had established in Minneapolis, Seattle and North Tacoma. We visited the Shoreham shops of the Soo Line in Minneapolis. We also later

went through the shops of the Chicago and North Western in Chicago.

Q. In 1951 when you were receiving your road diesels did you do any special work with those, when the first General Motors or Alco Units came west?

A. Four units of the Alco locomotives were transferred from the Eastern Region to provide ^{Comparative} ~~operative~~ tests. The diesel shop at Calgary was nearing completion but things were not completely organized. It was necessary for us to improvise the maintenance and keep what was a matter of 14 locomotives on the road during the period that the shop was being completed. At that time we were all very active in riding the locomotives and assisting in the training of enginemen. The training would actually be undertaken by the road foremen but we would ride for the instruction sometimes of the road foremen.

BY THE CHAIRMAN:

Q. You say "we", whom do you mean?

A. I was General Inspector of Diesel Equipment and at that time we had set up an organization whereby we had a district inspector of diesel equipment and two assistant inspectors of diesel equipment.

BY MR. SINCLAIR:

Q. When you were dealing with these tests of the Alco Units, were you or were you not responsible for the maintenance of the equipment?

A. During the early stages I was held responsible by the Superintendent of Motive Power for their maintenance.

Q. Personally?

A. Well, personally, yes. I was out there representing him to see that the units were kept on the road.

Q. When the Fairbanks-Morse units were received by the company, did you have anything to do with them, Mr. Woodland?

A. Yes. I again rode the freight and passenger tests. I did not follow these units quite as closely as I had done with the ones previously, but I did ride the first passenger tests for a period of eight days between Medicine Hat and Vancouver. I might say at this time we were particularly concerned about the operation of the steam generators in this country and a lot of our investigations were into the manner in which they had to be operated and maintained.

Q. Had they been causing trouble?

A. They had given a very considerable amount

of trouble in the United States, but in 1951 the Vapour Heating Corporation put out a new generator and they were so sure it would eliminate the troubles that previously had been encountered that they put it out as the O.K. Generator. This generator has proved to be very much of an improvement over any previous type.

Q. Are they on the Fairbanks-Morse Units?

A. All generators used on the Canadian Pacific are O.K. Generators, on the 4625, the 3000-capacity or the 4740, the 4000-capacity boiler.

Q. In the years since you have been Diesel Inspector, General Inspector of diesel power in Western Canada, how many miles would you have ridden on diesel units?

A. I have never kept a record of my mileage, but during the early days of dieselization we used to be running what seemed to be almost continuously. I think I can say conservatively I might have ridden over 100,000 miles on the different types of road motive power.

Q. As Diesel Inspector, if there is a failure; as General Diesel Inspector, if there is a failure of a diesel unit would that come within your responsibility?

A. That was one of my primary responsibilities. All failures were reported by wire to the Superintendent of Motive Power. If I was in Winnipeg I would handle the correspondence relating to the failure and during the investigation into it. If I was in Calgary or the West, if I was on the ground I would personally investigate it.

Q. You are speaking so quickly it is very difficult for the reporter to follow you. Would you try to slow down a bit?

A. I will try to.

Q. Now, Mr. Woodland, with regard to the internal combustion engine. What has been the development as it has been applied to motive power for railway operation? I do not want you to go into this in complete detail, but would you just sketch it out for the Commission if you do not mind?

A. To the best of my knowledge the first internal combustion ^{engine} was a gas engine of about 150-horsepower, which was applied to a converted passenger coach on the Union Pacific Railroad; this was about 1905 (?).

BY THE CHAIRMAN:

Q. That was a gasoline engine?

A. That was a gasoline engine. That engine served a useful purpose in

branch line service over the years until about 1924 or 1925 when there was a company in the United States making gasoline-powered cars with an electric drive. They were developing about 900-horsepower. There were a considerable number sold. The Canadian Pacific bought some, I think around 1923, at about 500-horsepower.

The diesel engine had not been used because it was much too heavy. Originally it weighed some 250 pounds per horsepower, but by 1934 this weight had been reduced to about 19 pounds per horsepower which made it adaptable to motive power equipment.

You may recall the sensation caused by the Burlington Zephyr in 1934 when with diesel engine powering two units it ran non-stop from Denver to Chicago right into the Exhibition Grounds, a distance of about 1,000 miles in about thirteen hours.

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At that time it was assumed that diesels had a place on the American railroads and the railroads then asked for a universal type of locomotive that could be used in freight or passenger service and I think the first freight locomotive was used in 1938. I can remember reading of tests that were conducted on it by the Santa Fe and it ran 800 miles non-stop.

BY MR. SINCLAIR:

Q When did the Canadian Pacific first get into diesel locomotives, Mr. Woodland?

A The Canadian Pacific obtained their first yard diesel engines, apart from the experimental engine that has been referred to here, in 1943.

Q And then the first road power?

A The first road power was purchased, I think, for the Montreal-Wells river in 1949.

Q Outside of the E and N application?

A Outside of the E and N which slightly preceded it.

Q Now, these diesels that are now on the Canadian Pacific -- I am going to produce at the request of the Chairman, I think you maybe heard it this morning, a list of the various types we have on the Canadian Pacific

and give them their numbers, but just generally what types have they got on the Canadian Pacific -- never mind specifying them closely, but give the Commission just what types?

A The first unit purchased was of the car body type, A and B units, the A having a control cab, B having no control cab.

BY THE CHAIRMAN:

Q Are you now speaking of road?

A This is road engines. With that first order we also purchased, I think, four road switchers or, as you say, the Baldwins were road switchers but very much akin to a yard engine in itself. But the road switchers as we know them today were purchased when the Algoma district was dieselized.

BY MR. SINCLAIR:

Q What year was that?

A 1949. And in the first order that came west ^{from} ~~by~~ General Motors there were three road switchers as we know them today.

Q Out of the first group were four to the Algoma and three for the west?

A That is correct. The next year, GP's or general purpose locomotives as these road switchers were designated became increasingly popular and

we bought, I think, 16 or 18 of them that year.

MR. LEWIS: That would be 1950?

MR. SINCLAIR: 1951.

THE WITNESS: I am not too sure of these dates. It would be, I think, around 1951 because our first units came out to Calgary in 1952. But anyway the succeeding year after the first one included a number of road switchers and our plans for road switchers have increased since and we have not bought any car body units since, I think, 1954.

BY MR. SINCLAIR:

Q Is it part of your duty to recommend the type of diesel power the company should get? Is that part of the work you do, Mr. Woodland?

A Only inasmuch as the superintendent of motive power might ask my opinion. I had no part in formulating company policy, of course, but this question, I can remember quite well, was very thoroughly discussed and the pros and cons of the purchase of road switchers was considered of prime importance and I remember a meeting in Vancouver where it was decided to make the bulk of the order road switchers. There was one very good reason for that, being that

the road switcher was considerably cheaper than the A units. Every unit is a control unit and it provides much better vision to the rear. It can be adapted for freight and passenger service and allows more flexibility. It was contemplated that we would be using these units on the branch line services where we would only need a single unit and it was felt we should take steps as early as we did to provide a pool which could be used anywhere in the country.

BY HON. MR. McLAURIN:

Q And yard service too?

A Yes, another very important feature was during lay-over times at terminals road switchers could be placed in yard service.

Q You would never use an A unit there?

A No, you would never consider that.

Q It just is not used?

A It just is not used for service in yards, no. You may switch with an A unit to set off cars or pick up cars on the road.

Q But you never put it in the yard?

A No, never.

BY THE CHAIRMAN:

Q Why don't you use road switchers altogether in the yard rather than yard engines?

A The road switcher is provided -- the

smallest one is 1500 horsepower and we have found that the yard engine averages an output of approximately 100 horsepower throughout its shift. So even with a 660 horsepower engine we are pretty heavily overpowered except for some specialized applications in the yard and, of course, the cost factor enters into it and the yard engine which has not the alarm system nor requires it and is not so elaborate is used for this purpose which it was designed for.

BY MR. SINCLAIR:

Q Now, Mr. Woodland, would you just give the Commission a short description of the diesel unit, how it works?

A Well, I like to think of the diesel locomotive as an electric locomotive. It has a diesel engine which is directly connected to a direct current generator which provides power to four traction motors which are direct-gearred to the wheels. The power naturally has to go through switches and these are automatically controlled to change ^{the motor connections} as the generator tries to match the demands of the traction motor to the loading of the engine.

Q Yes?

A All the other equipment is more or less

just a duplicate of what was on steam-engines. I am speaking now of the air equipment and other auxiliaries that are necessary for its operation.

BY HON. MR. McLAURIN:

Q The diesel power is connected to the huge generator?

A That is right, just the same as if you took the power station out of a building and put it on a locomotive.

BY THE CHAIRMAN:

Q Something like the generator of a car?

A That is exactly what it is, sir.

BY MR. SINCLAIR:

Q Now, on these road operations, Mr. Woodland, what is the practice as to multiple-unit operation? Is that the general practice or is it an unusual practice, what is the practice?

A I would say by far the majority of our locomotives are multiple-unit locomotives and breaking them down further I would say that by far the majority of our multi-unit operations are two-unit operations with some four-unit operation in the mountain territories.

BY THE CHAIRMAN:

Q That is, either two or four?

A No, we would run three and we often-times run three, just to meet the demand

of traffic and the disposition of power.

BY HON. MR. McLAURIN:

Q You have nothing but diesel electric on the Canadian Pacific Railway?

A We have nothing but diesel electric locomotives.

Q How do we get the words "diesel hydraulic"?

A The company is presently making a pretty intensive study of diesel hydraulic locomotives for branch line service.

Q Why?

A As a matter of fact, our RDC car, that is the rail diesel car built by the Budd Company, is a diesel hydraulic car and they use the fluid drive developed by Buick. They have a diesel engine, driveshaft, torque converter much the same as the unit you have on your automobile and it drives one pair of wheels on one truck. There are two diesel engines and two torque converters. They are trying to adapt that to a heavier locomotive and they have a torque converter developed that will transmit horsepower up to 1000.

Q But that is still in the experimental stage?

A No, it has gone beyond that. I think it is used very extensively in Germany.

That is one of the German types we are testing today and we also have had torque converters offered by some American concern.

Q Are there any American railroads using them yet?

A I don't think any of them have got beyond the first stage.

BY HON. MR. MARTINEAU:

Q Would there be an advantage in them?

A That is an engineering dispute, sir. There are advantages to each type. Let us put it that way. But I think what you would lose on the roundabouts you would gain on the swings. That is about what it would amount to.

BY MR. SINCLAIR:

Q That would be the answer by an electrical man, anyway, is that correct?

A Yes, I myself favour the electric locomotive. I think it has inherent advantages which might far outweigh the advantages of the torque converter.

HON. MR. McLAURIN: It is a matter of feeling curiosity rather than feeling preference.

BY MR. SINCLAIR:

Q Do you know what kind of power there is on the 44-ton switching locomotive that the company has recently secured?

A I understand they are Caterpillar diesel engines and they are hydraulic drive.

Q Now, when you are operating in multiple consist on a diesel locomotive, Mr. Woodland, how do the protective devices and the knowledge of them in other than the lead unit reach the engineman who is running the diesel?

THE CHAIRMAN: That is an extensive subject, is it not?

MR. SINCLAIR: Yes, sir.

THE CHAIRMAN: We will adjourn until 2.00 o'clock.

---At 12.25 p.m. the Commission adjourned until 2.00 p.m.

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Monday,

April 8, 1957.

AFTERNOON SESSION

--- The Commission resumed at 2 p.m.

B. B. WOODLAND, recalled,

BY MR. SINCLAIR:

- Q. Mr. Woodland, just before lunch you were describing the diesel electric locomotive, and I had asked you about multiple units, and you explained the practices in regard to that. I think I had asked you a question about the operating of a multiple consist of locomotives, as to how the power was controlled from the leading unit and what provision was made to have information as to protective devices in other than the lead unit conveyed to the engineman on the lead unit?
- A. At the engineer's control stand he has a throttle and a reverse lever, and what is known as a transition lever, which is no longer used to effect control in a multi-unit.
- Q. What is no longer used?
- A. The transition lever. It is a carry-over from the older unit ^{when} ~~with~~ the transition or changing of motor connections ~~which~~ used to be done

manually. When the engineer places his reverse lever in the forward position and opens his throttle, the control response is carried by a 27-wire cable between the units. This control cable sets up circuits which act on the governor to increase the engine speed; it acts on the electrical system to allow the generator to produce power; it also establishes the protective circuits so that if a defect occurs in any unit, an indication of that defect will be received in the control cab.

Q. Of the lead unit?

A. Of the lead unit. It should be understood that when the alarm, as it is commonly known, is received, it advises the engineer that a defect exists, and that protective action has been taken; no emergency exists; the equipment has already been protected.

Q. Who protected it?

A. It was automatically protected by the device installed in the equipment.

Q. Why do you call it an alarm then?

A. That word has been loosely used; generally it should be interpreted as a signal.

Q. A signal of what?

A. A signal advising of a defect in the

locomotive, in one of the units of the locomotive. Because it rings a bell, I suppose it has been termed an alarm.

BY THE CHAIRMAN:

Q. You introduced all this, Mr. Woodland, by saying that the throttle had to be in a certain position, and the reverse lever in a certain position. I don't quite follow you. Supposing the train is going along with a multiple unit, and some alarm rings and a light flashes. In the first place, if something irregular happens does a bell ring and a light flash?

A. Yes.

Q. In all units?

A. A bell rings in all units; a light is indicated in the leading or control unit cab; and a light is indicated in the unit which is ^{affected} ~~effected~~ by the defect.

Q. Now, you were just saying that the alarm is only a signal, and that so far as the engine is concerned something has happened to protect it already. Is that what you said?

A. That is correct.

Q. Would you go over that again?

A. Let us say that for some reason the lubricating oil pressure in the engine

of the third unit dropped below what the manufacturer had determined ... to be the safe pressure to adequately lubricate the engine. When that pressure dropped below the setting on the protective switch, the switch would trip, the engine would shut down, a yellow light would light in the cab of the leading unit, a yellow light would light in the engineroom of the unit affected, or if it was a road switcher in the cab of that unit, and an alarm bell would ring in all units.

Q. Then what happens?

A. The engine has shut down, and you would proceed --

BY HON. MR. McLAURIN:

Q. The engine shut itself down?

A. The engine shut itself down.

BY THE CHAIRMAN:

Q. To go back, what connection has the position of the throttle and the reverse lever with all this? In the first place, I would have thought if the train was moving ahead the reverse lever would not be used at all. Would you explain that?

A. The reverse lever is a lever which has a forward position... It is a small handle, located immediately adjacent to

the engineer's seat; it has two positions, forward and reverse.

Q. What is its function?

A. To govern the direction of the locomotive as it moves.

Q. And that is all?

A. That is all. If the engineer places it in a forward position, the engine cannot produce power electrically until the reverse lever is placed in a forward position and the throttle opened to No. 1 throttle position.

I was merely trying, sir, to explain how this control governed the function of the engine as well as established the protective circuits throughout the four units.

Q. So that this alarm signal would not occur except when the engine is in motion?

A. Oh no.

Q. I should say when the train is in motion. It will happen when the train is stopped, if motive power is being developed?

A. Yes, if the engine is running.

Q. Take the case of the particular alarm that happens because of low lube. What can the engineer or anybody else on the train do, or what should they do?

A. The action to be taken then is to go back to the unit that was shut down;

if it was a General Motors or a Fairbanks-Morse you would re-set it by the re-set button which is located on the governor. You would re-set that button and start the engine up. If the low lube oil button tripped again, the generally accepted practice is to leave the engine shut down because it indicates there is a defect which might cause serious damage.

Q. We have been told this morning that the fireman has not received any instruction or training to do that, as I understand it?

A. It is a very simple function; it is merely a matter of pressing the small tab button ^{on} the side of the governor. I think I would be remiss if I was to suggest to you that the majority of firemen are not capable of doing that, or are not aware of how to do it. They definitely are.

Q. Supposing you have no fireman on the unit, what then?

A. In most instances the locomotive could continue until it reached a station or a siding, at which time the engineer would stop and go back and re-set the button, and try to continue the operation. If it shut down again he would then know

that he was unable to operate that unit. If the controlling grade on the grade territory was such that he could not proceed without over-loading the single remaining operative unit, he would contact the despatcher, tell him about the defect --

Q. Before that he would be stopped?

A. He would be stopped, yes. The despatcher would either suggest to him that he reduce his train, or that he would provide assistance in some form or other.

BY MR. SINCLAIR:

Q. Just on the question of the low lubricating oil, **what are** the causes of low lubrication pressure?

A. Low lubricating oil pressure can be caused - and I think possibly the most general cause is that of a plugging of the strainer which is placed in the lubricating oil line to separate any fairly large-sized particles from the oil so they would not contaminate the bearings. Another cause is --

Q. Before you go to that, would this be a filter you speak of?

A. The proper term is a strainer. In addition to the strainer, you have a filter. The filter is not a full-flow

filter; in other words, all the lubricating oil in the pressure system does not pass through the filter. On all locomotives they have a by-pass filter system; a certain percentage of oil runs through the filter, is cleaned and returned to the crank case. In the case of the strainer, all the oil flows through the strainer.

BY THE CHAIRMAN:

Q. Is it a screen?

A. It is a screen; some types are a metal disc, a finely perforated disc, with openings in the nature of ^{two one-thousandths} ~~2,000th~~ of an inch, bounded together and piled in stacks. If this filter becomes plugged, because the entire flow of oil goes through it, the pressure would drop, and the low lube oil alarm would sound.

BY MR. SINCLAIR:

Q. Could an engineman or fireman clean that strainer, or get at those filters?

A. Very definitely not. When that occurs that strainer has to be cleaned; it has to be dismantled and boiled, cleaned with a solvent; and you have to be very, very careful that the job is thoroughly done, because it will only plug very quickly afterwards if it is not properly done.

BY THE CHAIRMAN:

- Q. You were saying that if you got a signal from this cause, and somebody went back and re-set the switch and the train started up again, if that alarm did not occur again that would indicate that its cause was of a temporary nature?
- A. That could be caused by an engine over-heating, sir. When an engine becomes over-heated the lubricating oil, which is cooled by the cooling water through a heat exchanger, rises in temperature, its viscosity drops, and consequently the pressure drops. If the engine cools down you could re-set the low lube button and proceed without further incident, if the cause was an over-heated engine.
- Q. On these exhibits where there has been an entry "Hot engine", and other times "low lube", do I understand that if you have a hot engine you have at the same time a low lube?
- A. If you have a hot engine on the Alco, you will remember the hot engine alarm reduces the engine speed to idle. On General Motors or Fairbanks-Morse, no action takes place other than the alarm. If you were to continue to

operate after you had received a hot engine signal you eventually would get a low lube oil button trip, because the oil temperature would rise, the oil pressure would drop and the engine would shut down.

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BY MR. SINCLAIR:

- Q. Itself? Automatically?
- A. Yes, automatically.
- Q. On the filters on these road units -- these by-passes -- is it possible for an engineman or a fireman to get at those filters or are they enclosed?
- A. No, they are contained in a large generally tank-like structure which is well secured with ten or twelve bolts. It is not expected -- in fact, no engineman would attempt to remove those filters. I am speaking now of lubricating oil filters.
- Q. Can you turn those filters?
- A. No, they are not that type of filter. ~~There~~ ^{That} is a mechanical filter. They are what we call a sock. The flow of oil from a multi-element unit -- there could be six or eight -- the oil flow through them separates any coagulated materials and therefore cleans the oil.

BY THE CHAIRMAN:

- Q. So, where the trouble is a filter or screen trouble, both of those call for the attention of someone more skilled than the engineer?
- A. I have attempted to clean screens at subdivisional terminals through improvised means but without success.
- Q. But what I mean is that it is outside the scope of an engineer's qualifications?

A. Very definitely.

BY MR. SINCLAIR:

Q. You said there was a reset button for low lube on General Motors and Fairbanks Morse, is that correct?

A. Yes.

Q. What about Alco?

A. There is no reset button on an Alco for low lube. As the previous witness mentioned, when the engine is shut down preparatory to starting a light shows and a bell rings ^{until you} ~~and~~ ^{get the oil pressure up.} ~~then you set the brush pressure up.~~

Q. You do not have to take any action on Alco?

A. No, merely ~~reset~~ start the engine. There is nothing you can do in the way of resetting any device.

MR. SINCLAIR: While we are on this subject perhaps we might follow up some matters we have discussed with various other witnesses and answer any question that the Commission has.

THE CHAIRMAN: Yes, we should follow up this subject with this witness.

MR. SINCLAIR: You will remember that Mr. Fraine gave some general views on the question of protective devices and some of the other witnesses referred to them but Mr. Woodland is the man who has the detailed knowledge about protective devices.

BY MR. SINCLAIR:

Q. Let us take ground relays, first. What is the purpose of a ground relay protective

device?

A. The ground relay is the only protective device on the locomotive to protect the high voltage or power circuit.

Q. It protects the power circuit?

A. Yes. That is the circuit which consists of the main generator, the wiring to the traction motors and the traction motors.

Q. And what causes a ground relay?

A. A ground relay is caused by any leakage path through the insulated portions of the circuit -- that can be due to wiring -- the covering on the wiring abrading -- rubbing off -- or it could be due to a breakdown in the insulating materials used in the construction of the power switches. Or, it could be due to what is called a flash-over.

Q. Would ^{dist}~~delay~~ in a relay cause a ground relay?

A. Not in a relay, no.

Q. Now, what happens in a ground relay? Have you got a bell or light or what do you get?

A. When a ground relay trips you get usually a white light in the control cab of the leading unit, a white light in the engineroom or cab of the unit affected, and the alarm bell rings in all units. I should say here that on the first General Motor locomotives we purchased we got neither a light or a bell. There was no alarm of any kind when a ground relay operated. I should also add that in the General

Motors locomotive ~~when the throttle is~~ placed in the fifth or sixth position the engine will shut down. In many cases the first indication the engineman would have that he ^{had} ~~has~~ lost a unit would be when it shut down after a ground relay tripped.

Q. In other cases of a ground relay on the various makes -- before I put that question, by the way, you said "usually there was a white light". Are there different coloured lights on some of the makes? Is that what you meant by saying "usually"?

A. I was thinking particularly of the fact that there was no light on some units.

Q. There was no light or bell on some of the earlier General Motors units as you have just explained?

A. That is right.

Q. Is that what you had in mind when you referred to the phrase "usually there was a white light"?

A. Yes. I should add, Mr. Sinclair, that usually these alarm lights are identified by a printed strip and if there is any difference in the lights -- supposing a man was operating a unit to which he was not accustomed and the light flashed, it is usually identified by a printed strip under the light which indicates what the light is.

Q. Is that in the locomotive?

A. Yes.

BY THE CHAIRMAN:

Q. There is a label on it?

A. Yes.

BY MR. SINCLAIR:

Q. What happens when a ground relay alarm protective device applies, Mr. Woodland? What happens to the motor?

A. The generator stops producing power and the engine returns to idling speed.

Q. Automatically?

A. Yes, automatically.

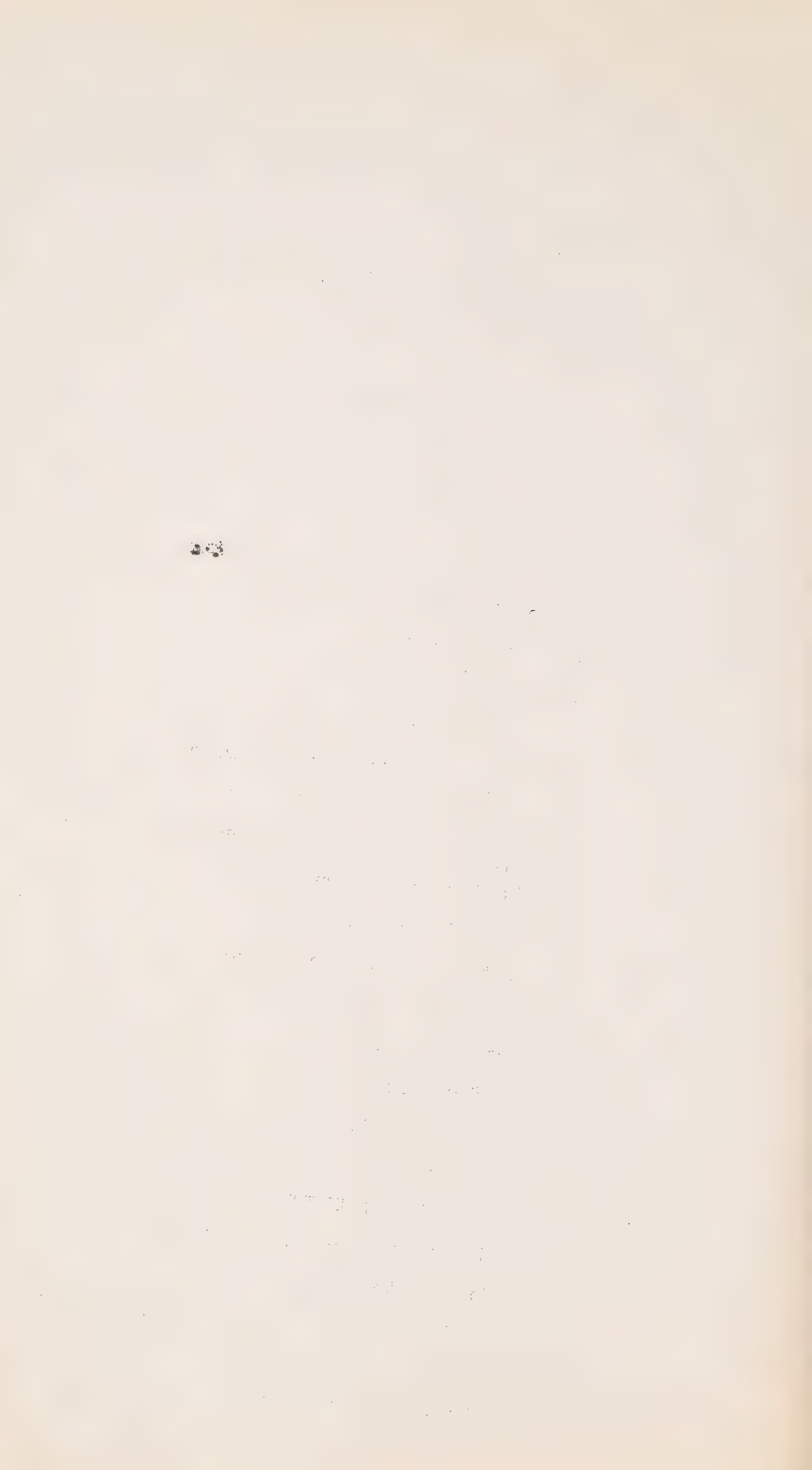
Q. And what can be done, if anything?

A. The ground relay can be reset, the locomotive again operated under power. We have a general instruction in the western region which I believe holds true for the system, that if the ground relay trips three times the unit must not be again placed under power. The reason for that is that three indications of a ground relay indicates that it is not just a floating defect but that there is a positive defect and any repetitive operation under power might lead to more serious damage.

BY THE CHAIRMAN:

Q. What do you mean by a "floating defect"?

A. Well, often times, sir, in a traction motor lead, you might have -- the cable might be moisture soaked and going around a curve it might swing up against the metal part of the



frame. That would operate your ground relay. You would go back and reset it and you might operate for 20 or 30 miles until it swung against the frame again and would trip again. We have had some experience with that type of defect during the winter months.

BY MR. SINCLAIR:

Q. During?

A. During the winter months.

BY THE CHAIRMAN:

Q. And again, the actual cause of that is something that has to be ascertained by someone at a stationary point other than the engineer?

A. That can be one of the most difficult defects to locate. You may have to make a protracted search. You need electrical measuring instruments to do it. It is definitely a job for the maintenance staff.

BY HON. MR. MARTINEAU:

Q. What is a "flash-over" to which you have referred?

A. A flash-over is a short circuit of the main generator or the traction motors. The current will jump from one brush to the other. In effect it is exactly the same result you would have from a lightning flash. You generally get a loud explosion, a very intense arc, and in jumping from one brush over to the other, the arc invariably goes to the grounded frame and operates the ground relay.

BY THE CHAIRMAN:

Q. What is the cause of it?

A. Its most common cause is operation over rough track or diamonds which will cause the brushes on the commutator of the traction motors to jump. When they jump and leave the commutator, an arc is established and the arc carries over to the next brush and causes the dead short circuit which leads to the intense arc I spoke of.

Q. But you must have plenty of operations over rough track and what was the other --

MR. SINCLAIR: Diamonds.

BY THE CHAIRMAN:

Q. Diamonds to cross?

A. Our instructions are that in crossing railroad diamonds, railway crossings or sections of rough track, the throttle is to be reduced to No. 2 or No. 3 position to lessen the amount of current flowing through the brushes thereby minimizing the danger of such an arc being established.

Q. Therefore, this flash-over is not an indication of a defect that can be cured by some repair, but it is to be avoided by a method of operation of the locomotive?

A. There are several causes of it. If the commutator is out of line or if the commutator has been abraded or roughened, that in itself would cause arcing because it is not

a true surface and that of course is a maintenance fault for which we are constantly on the lookout.

Q. What I mean is that if there is no -- for want of a better word -- "structural" fault or "maintenance" fault, do you get this flash-over by going over diamonds and rough track?

A. Oh yes.

Q. You would?

A. Oh yes.

Q. So that when this happens the engineer simply reports it and the shops staff have to see what the trouble is?

A. That is correct. A flash-over could occur and the ground relay could be reset and you might not have a repeat of it but at each inspection the electrical equipment is examined for signs of flash-over and they can be in varying degree and if they find a piece of equipment which has been flashed-over it is thoroughly cleaned up. The commutating surface may be gauged to determine that there is no fault there and, as I say, that is definitely a responsibility of the maintenance shop.

BY MR. SINCLAIR:

Q. What has been the experience of the company with respect to the type of trains that these ground relays most often occur on?

- A. Ground relays very definitely most frequently occur on passenger trains by reason of their higher speed, for one thing. The higher the speed at which a locomotive is operating, the higher is the voltage which is being generated by the main generator. Let us say that if you compare your wiring system at home which is a 110 volt circuit and you have 1,000 volts generated on locomotives, you can see that everything becomes more critical the higher the voltage is and consequently we do have the majority of our flash-overs and ground relays on passenger-operated locomotives.
- Q. What about hot engine? What is the hot engine protective device? What is its purpose? What is it there for?
- A. The hot engine protective device protects against overheating of the engine as ^{is} ~~was~~ indicated by the temperature of the cooling water rising above a predetermined setting.
- Q. What causes it to apply?
- A. Most generally it would be caused by the failure of the shutters to operate or the failure of the cooling fan to operate.
- Q. Is there any place on the system or is there not where there is quite often a hot engine alarm, Mr. Woodland?
- A. Yes, when operating through spiral tunnels between Field and Calgary there is a very heavy grade through the tunnels. The ^{absorption} ~~proportion~~



of heating ~~ing~~ caused by the three preceding units causes overheating of the air in the tunnel and the cooling effect is not great enough to keep the water temperature within limits. We ran extensive tests on that and found we ~~should~~ ^{could} operate through there by ignoring the hot engine alarm because the engine quickly cooled down as soon as you ~~leave~~ ^{left} the tunnel.

Q. What kind of alarm would you get on a hot engine?

A. A red light in the leading or control cab. You get a red light in the unit affected and you get an alarm bell in all units. The Alco engine returns to idle and the generator does not produce power. On Fairbanks Morse and General Motors engines there is no effect other than that the alarm is given.

Q. On those last two units, as you have explained earlier, the engine would continue to operate until such time as the low lube took over?

A. Yes. And in an emergency -- no, not in an emergency -- but if ~~you approach~~ ^{when ascending} the grade of a hill you ~~would~~ receive a hot engine alarm. ~~you~~ ^{you} can very often succeed in getting to the top by reducing the throttle, thereby reducing the output to the engine and the engine itself would cool down.

Q. Without taking any action at all?

A. That is right. That is to say, in some instances

you can do that.

BY THE CHAIRMAN:

- Q. What did you say was the inside cause of hot engine?
- A. The failure of the shutters or the failure of the cooling fan. Of course, I am speaking now of by far the most common cause. Any failure of your water-pump to circulate water through ~~the engine~~ ^{the engine} and radiator system would of course lead to hot engine.
- Q. What is involved in a failure of the shutters? What are the shutters? Where are they?
- A. The shutters are located exterior to the radiator and when the engine is idling the shutters are closed.
- Q. Automatically?
- A. Yes, automatically. The shutters and cooling fan are automatically controlled by temperature thermostats. If the shutter does not open no cooling air can be drawn in through the radiators by the cooling fan and practically all types of units have a means of manually operating the shutters. If they do not open -- they are controlled by the thermostat which keeps the solenoid ~~energized and compressed or~~ ^{energized and} to a cylinder which operates the shutter, the shutter lever opens or closes, ~~closing~~ ^{controlling} the shutters.

Q When they do not work automatically, what happens then?

A On some types you disconnect the linkage between this air-operated piston and then you have a little lever provided and you open the shutters, you can position them either full open, half open or to the point *required* depending on the prevailing temperature.

Q Who does that?

A That would have to be done by whoever was on the locomotive.

Q Would that be the fireman?

A The fireman would on occasion do that, yes.

Q When the locomotive was running?

A Well, we certainly would not ask the fireman to go back on a road switcher to open the shutters when it was running.

HON. MR. McLAURIN: When it was moving

THE WITNESS: When it was moving. On a General Motors locomotive, the car body type, you have a little more difficulty. There is no means actually provided; you can disconnect the linkage and force the shutters open, but that is not the general practice and the firemen do not do it and they are not expected to. There is no means provided to manually control the shutters.

BY THE CHAIRMAN:

Q On the type where it can be done

manually and you have no fireman, what?

A As I said, with the Alco locomotive you might lose power on that engine under normal circumstances and you could proceed to the next siding. If you were on the controlling grade and the tonnage of your train was such that you could **not** proceed, you would be forced to stop and the engineman would have to go back and manually open the shutters.

Q Or forward?

A Or forward if it was on the lead unit.

Q What about the cooling fan?

A The cooling fan, on the Alco and the Fairbanks-Morse^{can}, they can be operated manually if the difficulty is in the control.

Q Where is that located and what would you do and who would do it? Just give us the story, Mr. Sinclair.

BY MR. SINCLAIR:

Q Would you answer the Chairman's question, Mr. Woodland?

A On a General Motors locomotive there are four cooling fans located in the roof of the unit. As I said before, those fans are automatically controlled and they cut in at varying temperatures. The first one will cut in at approximately 165 degrees; the second one at 167 degrees; the third at 169 degrees; and the fourth

at 170 degrees and so on. There is no means of manually operating those fans on the General Motors and on the Alco locomotives.

BY THE CHAIRMAN:

Q You say there is no means of operating them; what does that mean if they do not operate?

BY MR. SINCLAIR:

Q That is on the General Motors?

A Yes.

Q Would that be all kinds of General Motors, road switchers and A units?

A They are very much the same. If you have a ^{head} ~~not~~ engine on that type of unit you are actually not expected to do anything to control that head engine.

THE CHAIRMAN: All right, take the other kind.

BY MR. SINCLAIR:

Q On the Alco?

A On the Alco the cooling fan is direct driven from the engine through a clutch which controls the speed as the temperature of the cooling water increases the fan's speed increases. That is done automatically. There is a provision to eliminate the automatic control and make a direct connection electrically so that the fans can be operated at certain speeds by closing the manual switch rather than

depending on the automatic switch.

Q Who can do that?

A Any person can do that that goes back to the unit.

Q Is that inside on the panel on the engine?

A On the car body type that is located on the engine control panel in the engine room. On the road switcher it is located on the bulkhead adjacent to the radiator at the front of the engine.

BY THE CHAIRMAN:

Q If you had no fireman who would do it?

A You would be forced to proceed to the next siding if you could, and if you were in such territory that you could not proceed you would be forced to stop.

BY MR. SINCLAIR:

Q Mr. Woodland, if you were on the controlling grade and your engine went off on account of low lube or on account of a ground relay so that you lost power, say it was in the second or third unit, or even the fourth unit of a four-unit consist, or any unit, would it be possible to recover the power by re-setting the protective device before your train stalled?

A If you were on the controlling grade with a full-tonnage train you would stall before you could restore power to the trailing unit.

Q. No matter who was on the locomotive?

A. No matter who was on the locomotive.

BY THE CHAIRMAN:

Q. What do you mean by controlling grade?

A. On each subdivision there is what is known as the controlling grade, that is that part of the railroad -- to put it simply, it is the part which has the steepest grade. Every subdivision has a ^{tonnage}~~tonnage~~ rating established for every type of power used that it can haul up that controlling grade. The controlling grade may only be two miles or three miles in a 125-mile subdivision, but that factor has to be considered when the tonnage ratings are established.

BY MR. SINCLAIR:

Q. Have you ever been on a diesel locomotive when you have had an alarm and lost power and stalled on a controlling grade?

A. Yes.

Q. Before anybody could recover?

A. Yes.

Q. Before you could recover?

A. Yes.

Q. Did you try or did you not?

A. We certainly did. We rushed in; we always used to every time the alarm went off, but we could not do anything. This was on the controlling ^{grade of}~~grade~~ in the Mountain Subdivision between Beaver mouth

and Glacier, with four units.

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THE CHAIRMAN: What about the water-pump?

BY MR. SINCLAIR:

Q What about the water-pump? What about if the water-pump fails?

A There is absolutely nothing that can be done. The pump would have to be replaced at the maintenance shop. If that occurred in the wintertime the engine would have to be drained. If the engine could not be idled and the temperature maintained, the engine water would have to be drained and the engine would be moved dead to the nearest maintenance terminal.

BY THE CHAIRMAN:

Q Who would be responsible for draining the water?

A The engineman would be responsible; he would be responsible for any frost damage that occurred through his failure to drain it.

BY MR. SINCLAIR:

Q Then with regard to the engine overspeed. What is the purpose of the engine overspeed protective device?

THE CHAIRMAN: What causes the overspeed first?

BY MR. SINCLAIR:

Q What is the cause of the engine overspeed?

A When an engine is operating at full load, if the load is very suddenly removed, which might occur when the ground relay trips ~~and~~ the governor may not be sensitive enough to control the speed of the engine before it soared up above the trip setting.

BY THE CHAIRMAN:

Q You said if the load is suddenly removed that would cause overspeed, and you went on to say that that might be caused by the ground relay.

A Yes, sir. You see the ground relay would ~~unload~~ ^{operate} and the generator load would be removed from the engine and the fuel pump would be delivering the maximum amount of fuel which would cause the speed to soar.

BY MR. SINCLAIR:

Q You mean the electrical load?

A Correct.

Q The power?

A Yes.

Q The electrical power load down from the motors to the traction gear?

A That is correct.

Q And that protective device is for what purpose?

A If the engine speed was to exceed very much its maximum designed loading it would throw itself to pieces. All locomotives in service are equipped with an overspeed trip to protect against that

type of damage.

BY THE CHAIRMAN:

Q Is that a type of governor?

A No, it is based on the ^{flyball} ~~ball~~ governor principle, and as soon as the speed goes up higher than the setting it trips, and either acts directly on the governor or directly on the fuel system to cut off all fuel to the engine.

BY MR. SINCLAIR:

Q What kind of alarm would you get with that protective device?

A On the General Motors and Fairbanks-Morse, when the engine shuts down you get a blue light and an alarm. The blue light is in the leading control cab and in the engine-room or cab of the unit affected. On the Alco you would get your low-lubricating oil light which indicates that the engine is shut down.

Q With this engine overspeed, what can you do to recover, if anything?

A On the General Motors and Fairbanks-Morse there is a small lever at the end of the engine which is pulled to reset the overspeed trip. The engine is then re-started and I would say in very many instances no further trouble is encountered. On the Alco locomotive you have a small button on the left-hand side of the engine which is

pushed in to re-set the overspeed.

Q Who can do that?

A Anyone.

Q Pull that lever or push that button?

A Anyone.

Q If there was no fireman there who would do it?

A The same condition would hold true depending on where the locomotive was. Action would be taken, either to stop immediately or stop at the next siding.

BY THE CHAIRMAN:

Q It is not something that the engineer, for instance, could rush up and do?

A No. The devices that protect the engine are necessarily in the engineroom; that is the low-lubricating oil and overspeed trip and hot engine.

Q On a road switcher, would that mean forward of the cab or behind the cab?

A On the Alco and Fairbanks-Morse that would be forward of the cab; on the General Motors that would be behind the cab.

Q So that to touch them at all he would have to stop the train?

A You have to leave your seat which certainly requires your stopping the train, yes.

Q That involves going outside, does it not?

A Yes, it does; it involves opening the doors on the road switcher which houses the

engine.

Q We have been told that that is an unsafe practice to do unless the train is stopped.

A I fully concur in that opinion.

BY MR. SINCLAIR:

Q Have you had any experience that would make you say that?

A Yes, I have. I was very nearly swept off the running board of a General Motors locomotive on the Portage Division when I opened the first door on the right-hand side when we were travelling about 40 miles an hour. There was a heavy northwest wind and I certainly learned my lesson in a hurry.

Q. Have you ever had any experience in going over open couplers between switching units?

A I would not do it; I would in an emergency cross over a gangway and the catwalk, but I certainly would not cross over open couplers.

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Q Have you given any instructions when you have been on the road for these many, many miles as to firemen going out on the running walk or across couplers -- have you given any instructions to firemen and enginemen?

A I certainly have and I have made it apparent to enginemen that they **should not** require the firemen to go back on the walkway in a road switcher while it is in motion. I might temporize on that a little by saying at speeds of 5 to 10 miles an hour but definitely on a scheduled freight train or with passenger trains it would just be criminal to even suggest that a man should go back.

BY THE CHAIRMAN:

Q Anything in writing to that effect?

A No, I don't believe there is.

BY MR. SINCLAIR:

Q Do you know whether the Brotherhood of Firemen have raised that with the company and asked them to not require their members to go over open couplers?

A I know that they were asking for the walkways between units and I am not too sure too that there would not be something in writing in that correspondence which might cover that they were not expected to cross over.

Q The firemen's union, have they not complained or do you know about having to go out across these couplers?

A I can recollect but not with any degree of certainty and I would rather not say anything.

Q You have spoken of four protective devices -- ground relays, hot engine, low lube, engine overspeed. Are they what are known as the basic protective devices or are they not?

A Those are the devices which are common to all types of road locomotives.

Q Are there any other protective devices?

A Yes, on the General Motors and Fairbanks-Morse locomotives in addition to the main generator they have another generator which produces the power for the traction motor blower motors and the cooling fan motors. If that power supply fails a blue light is indicated, the engine returns to idle and the alarm bell rings. You can see the necessity for that because if there were no power being produced to the traction motor blower the traction motors would not be cooled, they would burn out and they cost approximately \$4,500 apiece so it is very important that any failure of the cooling air system to the traction motors should

be indicated to the operator.

Q And what can you do when that happens?

A In most instances unless it is a blown fuse -- there are two fuses which protect those circuits -- unless it is a blown fuse which can be replaced you can do nothing.

Q Does the automatic device shut the engine off or take it to idle?

A It takes it to idle and the generator can no longer produce power.

Q Shuts it down?

A No, the engine idles and does not allow current to go down to the traction motors. The generator no longer produces power so there is no longer any danger of ~~heating~~^{overheating} the traction motors.

BY THE CHAIRMAN:

Q Can't go down or up?

A That is correct.

BY MR. SINCLAIR:

Q Now, are there any other so-called alarms on any of these other units, for instance, dynamic braking?

A A dynamic brake has a maximum load limit, that is, the traction motors cannot produce any more current than the grids can stand, and if you exceed that rating a light goes on to tell the engineer that his control lever must be reduced.

Q Is that the protection given when the light goes on?

A Yes, and the engineman reduces his dynamic brake lever to reduce the output from the motors. Today the dynamic output is automatically regulated in that something in there reacts when there is something wrong with the automatic lever and the light goes on.

BY THE CHAIRMAN:

Q Can you describe the working of a dynamic brake?

A I don't want to make this too ... the dynamic brake, what you do is you turn the motors into generators and you use the momentum of the train to turn these generators over to produce power. The power that is produced by the four motors or sixteen motors in a four-unit train is dissipated by resistor grids. In a four-motor locomotive it is exactly the same effect you get in going down a long hill with your car in second gear.

BY MR. SINCLAIR:

Q Where your motor is being used as a brake, is that right?

A Where your motor is being used as a brake. You are using the compression of your engine as a brake for your automobile.

BY THE CHAIRMAN:

Q In addition to the brakes that are normally used when the train is running in other circumstances?

A This is a thing apart from and separate ~~from~~^{to} the usual airbrake in locomotives and trains.

BY HON. MR. MARTINEAU:

Q And works on the entire train?

A It works as a retardation, with a retarding effect which is felt throughout the entire train and as a rough general rule you can assume a locomotive will brake the same tonnage down a hill as it will pull up a hill. In other words, in the mountain territory four units hauling 3,250 tons will ~~not~~ move that 3,250 tons down a long grade very often without using the automatic brake.

BY THE CHAIRMAN:

Q Then really the tendency of that dynamic brake is to put the driving wheels into reverse?

A That is exactly it, and it puts a retarding effect on the wheels which helps, of course, the entire train.

BY MR. SINCLAIR:

Q Is dynamic braking something that is confined to diesel locomotives? Is that the only application of it?

A It is used on the electric locomotives, but certainly is not available to a steam locomotive.

Q Now, what about on some of these units is the marker "wheel slip"? Is that a protective device, wheel slip?

A Any time one pair of wheels revolves faster than another pair of wheels on a unit the wheel slip light goes on, the power is not completely cut off, but it is automatically reduced from the main generator and sanding occurs automatically. If this is not sufficient to reduce the slip the light stays on, the engineer will reduce his throttle until the light goes out. If the light burns continuously it is an indication that one pair of wheels might be locked.

Q Might be what?

A Might be locked and it is one of the most important signals on the locomotive because with a 16-unit locomotive you have 16 pairs of wheels and any engineman --

BY MR. LEWIS:

Q You mean in a four-unit?

A In a four-unit you have 16 pairs of wheels and all enginemen have been continuously advised as to the function of the wheel slip light and its action.

BY MR. SINCLAIR:

Q What can any person on a locomotive do about it if the light continues to stay on, that is, after just reducing the throttle does not have any effect -- what can anybody on the locomotive do about it?

A They cannot do a thing unless, of course, the wheel slip relay operated and stuck and there would be very, very few instances of that. It would not be expected that an operator would detect that fault.

Q That is a maintenance job?

A Definitely, yes.

Q Could the fireman do anything on these various types of alarms you have been discussing latterly?

A These alarms are intended primarily for the engineman and have to do with operation.

Q For instance, on a dynamic brake grid if they got too hot is there anything a fireman could do to get at those grids?

A No.

Q Are they enclosed?

A They are enclosed.

Q Or the engineman either?

A It would not even be considered at all.

Q It would not even be considered?

A No.

BY THE CHAIRMAN:

Q I don't know whether you are going to deal with this or not, Mr. Sinclair, but I would like to ask Mr. Woodland, have you anything to do with qualifying engineers, training engineers to become familiar with all these things and other things that are involved in the operation of a diesel locomotive?

A During the early years from 1950 to, I would say, in and around 1952 I had quite some considerable amount to do. I am the Division Master Mechanic and I am responsible for the operation and maintenance of the locomotives.

THE CHAIRMAN: Are you going to ask this witness to tell us what is done?

MR. SINCLAIR: I can do it right now.

THE CHAIRMAN: No, I just wanted to make sure.

THE WITNESS: There is one other protective device.

BY MR. SINCLAIR:

Q There is one other protective device you have in mind?

A On the Fairbanks-Morse which is an opposed piston engine they have what is called an engine protector switch which trips to shut down the engine

if the crank case pressure exceeds, I think it is, two ounces. The importance of that is you don't want pressure in the crank case to atomize ~~and~~^{or} vaporize the lubricating oil.

Q And what can you do about that?

A Nothing, and if it trips the second time all instructions are it must be left at shutdown.

Q And if the fireman is there --

BY MR. LEWIS:

Q The engine must be left shut down?

A Yes. Anybody that blocked one of those switches or, for that matter, anyone that blocked any protective device would subject himself very, very seriously to criticism.

BY MR. SINCLAIR:

Q Have you had any experience of personnel on locomotives tampering with the locomotives, Mr. Woodland?

A Well, we have had some well-intentioned tampering, yes, and we have always discouraged it. I may say, we have had very few instances of protective devices being blocked out. They are **there** for the men's protection and they respect them.

Q We have **had** at other times what may be called experts saying that firemen are able to block a lay shaft or shunt a

relay and matters of that kind. What have you to say about such things as that?

A I have always preached --

MR. LEWIS: Who said that, Mr. Chairman?

THE CHAIRMAN: Mr. Sinclair said at other times. I don't recall those times.

MR. SINCLAIR: Well, experts called by the brotherhood in procedures at which they said there was work for the firemen to do.

THE CHAIRMAN: Well, if you could say if such evidence could be given here what would the witness say.

MR. SINCLAIR: Very well, sir.

BY MR. SINCLAIR:

Q If it was contended that a part of a fireman's work was, or what he might do would be to block a lay shaft or shunt a relay --

THE CHAIRMAN: What is that?

MR. SINCLAIR: Blocking a lay shaft, that is, to stop the governor from working.

THE CHAIRMAN: Or?

MR. SINCLAIR: Or shunt a relay. That is to offset a relay, to go around it, to by-pass a protective device.

BY MR. SINCLAIR:

Q Mr. Woodland, what would your reaction

be, what is your reaction and what is your advice as an expert?

A Well, it simply is not supposed to be done and it generally is not done and unless a man has a fairly complete knowledge of what he is doing, particularly with the electrical circuits, and similarly with the engine, any action taken like that in ignorance can lead to very heavy damage. We have been fortunate inasmuch as we have not had too many sad experiences in that connection.

BY THE CHAIRMAN:

Q Too many what?

A Sad experiences. We have definitely discouraged tampering. I don't only mean tampering but we have indicated that we do not expect anyone to go out of their depth in an attempt to get a unit home and I think it has paid dividends because we have not had any serious engine damages or electrical failures because of some protective relay ^{being blocked} or some unwise action having been taken.

BY MR. SINCLAIR:

Q What about the electrical cabinets on these units? What are your views about personnel going into the electrical cabinets of these units?

A We have instructions absolutely prohibiting the entry of anyone into electric cabinets while a unit is producing power. That includes our maintenance men and inspectors as well as any crew members.

BY THE CHAIRMAN:

Q What is an electrical cabinet?

A All power switches which control the flow of current between the main generator and the traction motors are enclosed in a metal cabinet called the high-voltage cabinet where the voltages can go up to 1,000 volts. The low-voltage cabinet comprises an enclosure housing the relays in the low-voltage circuit which govern the functions of control.

Q Well, between the two of them they cover the whole electrical circuits of the engine?

A That is correct, but I just merely wanted to point out in the one on the power circuit there is 1,000 volts potential and in the other one it is the battery potential or 64 volts which could not be considered too harmful to life. The other one, however, is capable of killing or seriously maiming.

Q. But apart from that, you say the engineer is not supposed to go into either?

A. That is correct.

BY MR. SINCLAIR:

Q. Now with respect to road switchers, we have been told that they have circuit breakers on these protective devices. One of the witnesses said they replaced the circuit breakers on some of the units. What is a circuit breaker?

A. A circuit breaker is a switch in which is incorporated a fuse which can be re-set.

Q. Is it like a circuit breaker in the home?

A. Exactly identical with the circuit breaker in your house.

Q. We have also heard about fuses which had to be checked. Where do you find fuses?

A. The only locomotive which extensively uses fuses is the General Motors, and they have been discarded in the last two purchases.

BY THE CHAIRMAN:

Q. What were you saying about circuit breakers?

A. A circuit breaker is a switch in which is incorporated what might be called a re-settable fuse. If the current in

the circuit exceeds the rating the circuit breaker will trip. In other words, the switch flips off. The **switch** is pushed to the off position and is re-applied to the on position. The locomotive manufacturers first used fuses in their circuits, but today they have generally adopted the circuit breaker as a means of circuit protection instead of fuses.

Q. You were asked about re-setting the circuit breaker?

THE CHAIRMAN: Did you ask that question, Mr. Sinclair?

MR. SINCLAIR: I was trying to draw a distinction between fuses and circuit breakers. I think he has explained it. I was going on to ask about the difference in re-setting.

THE CHAIRMAN: All right.

BY MR. SINCLAIR:

Q. Is there any difference in re-setting a locomotive equipped with circuit breakers to one that uses fuses?

A. In a circuit breaker you just place the switch to the extreme "off" position, and "on" again; whereas with a fuse you have to remove the fuse, and replace it with another fuse; or, you remove the fuse, test it, and replace

it if it is found not to be blown.

Q. Is there any difference in the ease with which you can re-set, as between the two?

A. Naturally, the circuit breaker is much easier to re-set than to replace a fuse.

Q. Is there any difference between what you can see? Can you always see a fuse that has blown?

A. You can see from the position of the circuit breaker whether or not it has tripped.

Q. And with a fuse...?

A. With a fuse you can't.

BY THE CHAIRMAN:

Q. Where do you find a circuit breaker on a diesel locomotive? In connection with what equipment are they used?

A. Well, in connection with the control circuit, the fuel pump circuit, the lighting circuits, the auxiliary generator circuit... As a matter of fact, all circuits which are 64-volt circuits.

Q. So, if any of these circuits fail to function -- and I am asking you this because I know nothing about it and I want to know why this subject is brought up -- it might be seen on inspection that one or more circuit breakers had tripped, and they should

be re-set?

A. Yes, they would be re-set; and of course if it continued to trip, you would know there was a fault there.

Q. Is there a circuit breaker involved, for instance, in any of these warning devices?

A. No - yes, the control circuit breaker controls the control circuit, of which the protective devices are part.

Q. Under what circumstances would a circuit breaker trip?

A. If there was a short circuit between two wires, that is the two bared portions of the wires in the circuit came together, that would trip the circuit breaker.

Q. Apart from any of these warning devices going off, could you have a circuit breaker trip which would effect either the movement of the locomotive or some necessary function of it?

A. Yes, if the control circuit breaker tripped the locomotive wouldn't produce power.

BY MR. SINCLAIR:

Q. Where is it located?

A. Right at the engineman's control stand.

Q. Right in the cab?

A. Right in the cab.

Q. And these protective circuit breakers are

there for what purpose? They are located throughout the locomotive, are they, on all the various circuits?

A. On road switchers, they are located in the cab, on the back panel or at the engineer's control station, and they are identically the same; they provide the same protection as used to be provided by fuses.

Q. The question I think the Commission is interested in, Mr. Woodland -- and perhaps you could help us on this -- are these circuit breakers set into the electrical control of the locomotive to provide automatic protection? Is that their purpose? Is that why they are there?

A. They are just there to protect against short circuits and wires burning up.

BY THE CHAIRMAN:

Q. Are they located at the hand of the engineer?

A. All the ones that would effect the operation of the locomotive are, yes.

Q. So that he can see for himself?

A. He could see quickly whether or not he had a circuit breaker out.

--- The Commission had a short recess.

THE CHAIRMAN: Mr. Sinclair, it has been suggested by my colleagues that perhaps Mr. Woodland could prepare an exhibit which would cover what he has told us about, taking each particular type and make of unit, showing the various alarms, where they go off and the purpose of them.

MR. SINCLAIR: In tabular form?

THE CHAIRMAN: Yes, tabulate what he has said. I think it would then be clear to every one, if that could be done.

MR. SINCLAIR: I think that could very easily be done, sir, and read in conjunction with this evidence it would cover the points.

HON. MR. MARTINEAU: And it should also show how the devices can be re-set.

MR. SINCLAIR: I understand, sir, you would like that in tabular form.

HON. MR. McLAURIN: It is not such an easy job. It requires the writing of an essay in which you translate technical terms into the vernacular.

MR. SINCLAIR: I think I could attempt it myself and then have Mr. Woodland correct it. I would not get into the technical terminology. We could give that in tabular form; it would not perhaps give the complete story, but it would give a picture of it.

HON. MR. MARTINEAU: What has been

said this afternoon could be put in that form, giving the types and makes of engines.

MR. SINCLAIR: I understand sir. As I say, it will not give all the detail, but it will cover the points.

BY MR. SINCLAIR:

Q. Mr. Woodland, now when we are dealing with these alarms, or these signals as you like to call them - other people have referred to them as protective devices - what experience have you had as to the frequency of these protective devices applying?

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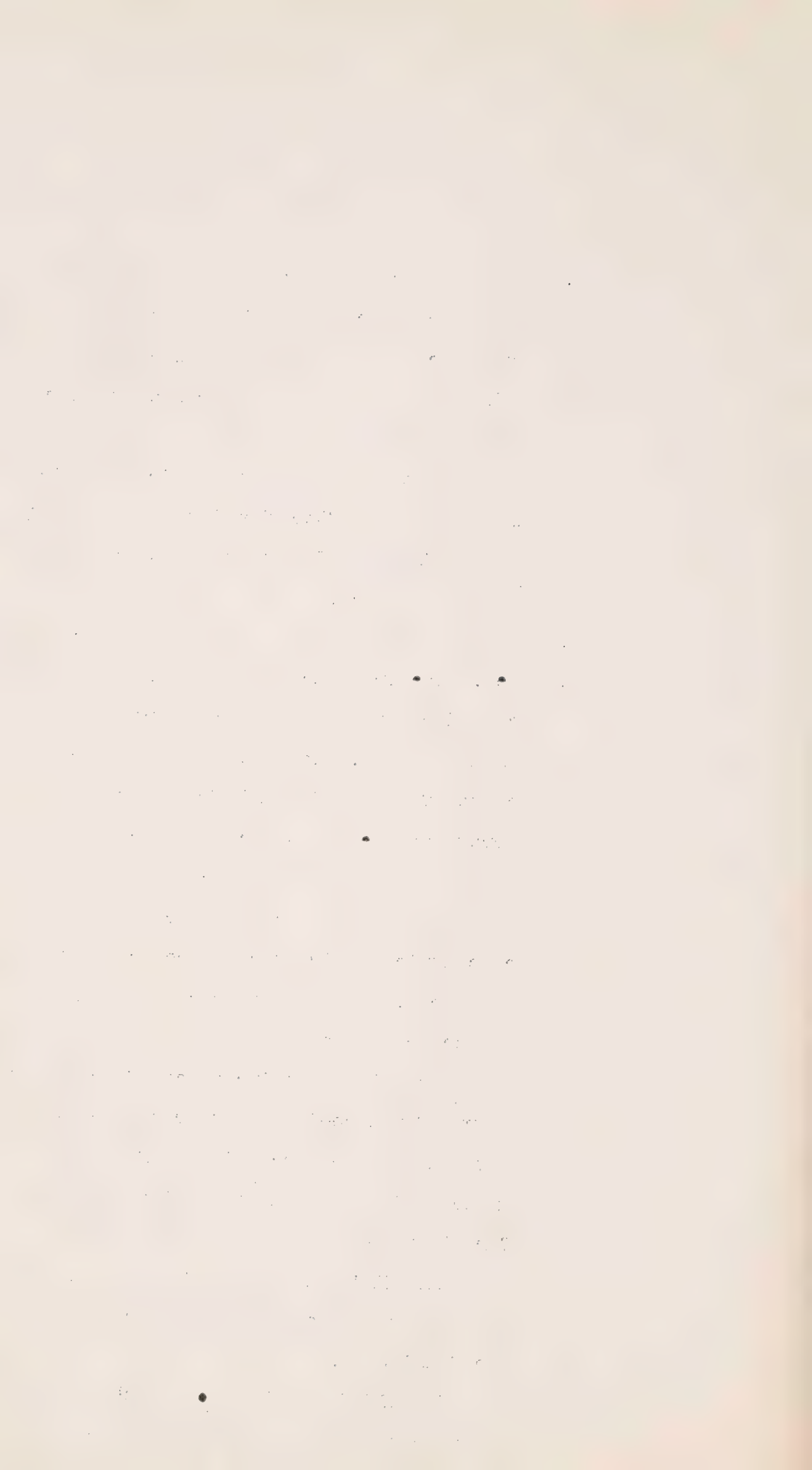
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- A. When I am riding locomotives I have had very few alarms occur when I am on the unit. That goes back to the first days when we were making tests and also later when we placed them into regular service -- when we placed locomotives in passenger service -- which was some time after they had been operating on the ~~Sloan~~^{haggen} and Mountain divisions ~~of~~ⁱⁿ freight service.
- Q. You are speaking now about diesel locomotives?
- A. Yes. The frequency of alarms went up considerably and they were in relation to ground relays. We undertook to determine the cause of this and found that it was due to irregularities on the commutator, as I spoke of them earlier. We undertook a campaign for grinding these commutators to get them concentric and drastically reduced the number of alarms. In my experience as general inspector of diesel equipment, I think I can safely say that the incidence of ground relay alarms far exceeds any other single type and I would say they occur in the following order -- if you wish me to give this information --

MR. SINCLAIR: Yes, if you will. We are trying to present a full picture to the Commission.

THE WITNESS: I would say that out of 100 alarms -- I am using this figure just as



an example -- approximately 60 or 65 of them would be ground relays.

BY MR. SINCLAIR:

Q. Yes?

A. The hot engines would come next at roughly ten per cent.

Q. Yes?

A. And low lube oils would be around three or four and the engine overspeeds would be somewhere along that line.

Q. That gives us 83.

A. And that is just about how it works out. The remaining 17 per cent would be due to other causes such as continuous wheel slip. I am speaking now of incidents that lead to train delays.

Q. Yes?

A. The wheel slips, control circuit faults and other defects which could not be corrected on the road -- nothing could be done and the unit would have to be ^{moved} ~~removed~~ to its maintenance terminal.

Q. Yes? In that 17 per cent to which you have referred it is your evidence that they are maintenance problems?

A. They would be involved in maintenance, yes.

Q. And you have explained the other 83 per cent as we went through it as to the proportion would be the type about which the crew could do something?

A. Yes.

BY HON. MR. McLAURIN:

Q. They would definitely involve train delays, stops and dispatching communications and so forth?

A. Yes.

MR. LEWIS: I am trying to understand this, Mr. Chairman. They would not be alarms strictly speaking?

THE WITNESS: No.

BY MR. LEWIS:

Q. So it is not really out of 100 alarms but rather 100 things causing delays?

A. Yes, possibly that would be a better description.

BY MR. SINCLAIR:

Q. You said that 65 per cent of 83 per cent of these matters -- would they all cause delays? I do not think that is the interpretation Mr. Lewis has put on the 100.

A. It is not quite like that.

THE CHAIRMAN: Well, the witness started out by talking about alarms out of 100 occurrences and got some place up in the eighties and then ran out of alarms and went into another area so that the 80 is 100 per cent as far as alarms are concerned.

THE WITNESS: Yes, let's keep it to alarms.

BY HON. MR. McLAURIN:

Q. That would be out of 85?

A. Yes, the ratio would be correspondingly the same.

MR. SINCLAIR: That would be 65 out of 85 -- that would refer to ground relays. Four per cent would be engine overheating and four per cent would be low lube.

HON. MR. McLAURIN: That is not right. It is not 65 out of 85. It is more than 65 per cent. Ten hot engines is not ten engines -- it is ten fifty-fifths out of 100.

MR. SINCLAIR: Yes, it is the factor multiplied by 100.

BY MR. SINCLAIR:

Q. What I intended to do was indicate by comparison what would be the frequency of alarms?

A. I would say that they occurred in that ratio. There would be roughly 15 to 20 times as many ground relays as hot engines. That is what I intended to signify.

Q. Are you covering both passenger and freight operations in that?

A. Yes.

Q. That is total diesel movements of all kinds?

A. Yes, that is correct.

Q. Excluding yards?

A. Excluding yards. In yard service the alarm is a very rare occurrence.

Q. Let us deal with yard engines. What protective devices are there on yard

diesels?

A. On the Alco yard switcher which has no alarm system -- that is there is no light nor bell --

Q. Yes?

A. It has a ground relay, and it has a low lubricating oil shutdown, and it has an overspeed trip, none of which are indicated by alarm indication.

Q. When they apply what can the fireman do, if anything, on a yard engine? Or rather, what does he do?

A. Normally we have maintainers in the yard and the maintainer is called or the shop is notified because it is immediately in the area.

Q. What does the engineman do? Does he just call the shop? How does he tell the shop? Does he just get on the phone?

A. Because they occur so infrequently -- other than that an overspeed can be reset -- there is none on the low lubricating oil on yard engines --

Q. Yes?

A. Even though the overspeed can be reset, very often the shop is called.

Q. That is the practice?

A. Yes, that is the general practice.

Q. Is it your evidence that when any protective device applies in the yard the shop is called?

A. Yes, if for any reason the locomotive shuts down or fails to produce power the shop is

notified.

Q. And they send out --

A. A man.

Q. A man?

A. Yes, either from the shop or a man who is assigned to scout around diesel engines in the yard.

Q. Let us take your own terminals at Winnipeg, for instance. Do you or do you not have men assigned to be available for work on yard engines?

A. As the shop track from which most of our engines are dispatched is some considerable distance from the shop we have two men assigned to handle engine servicing, freight servicing, and so on.

BY THE CHAIRMAN:

Q. Yard switchers are used in places other than large centres like Winnipeg? Do you always have a shop where a yard switcher is used?

A. Yes, in line with the practice that was developed for steam maintenance, we have a shop and a maintenance staff at every subdivisional terminal with a roundhouse of varying sizes but in our main line operations we definitely have a maintenance staff at every point where diesel yard engines are assigned.

BY MR. SINCLAIR:

Q. Let us take Brandon, Manitoba, for instance

which is located in a territory you know well. Would there be yard switchers in Brandon?

A. There are.

Q. And at a place like Brandon would there be a staff competent to deal with them?

A. There is.

Q. And what about Portage La Prairie?

A. We intend to get that 44-ton hydraulic switcher in Portage La Prairie and we have one charge hand there who has a mechanical background and who would be expected to maintain that power.

THE CHAIRMAN: I thought we heard some evidence earlier -- I may be wrong -- about the use of yard switchers at one or more points -- wayfreight or something of that kind. Am I wrong in that?

MR. SINCLAIR: We had one case which I think was put in as an observation by Mr. Youngs this morning of a 6500 class running for some 27 miles to Brockville.

THE CHAIRMAN: There is one I was thinking of in the west.

MR. SINCLAIR: There was one going six miles out put in by Mr. Russell -- out to Redcliff from Medicine Hat. That is the only one I can recall, sir, of yard switchers. I think earlier in the testimony there may have been one also that had gone out a short distance.

BY MR. SINCLAIR:

- Q. What is the general practice as to yard switchers, do you keep them assigned to any particular area?
- A. Yard switchers are generally assigned to yard work entirely.
- Q. And that may take them out within a radius of how many miles?
- A. They could conceivably be used on an industrial switching assignment laying within a radius of eight or nine miles of the ^{terminal} ~~switch~~ at which they are based.
- Q. And if they develop trouble, how would your fellow get out to see them? Let us take St. Boniface, for instance. Is there any means of getting from Winnipeg to St. Boniface?
- A. We have a shop truck. We have three engines assigned to St. Boniface. They go over there twice a week.
- Q. Or when they are called?
- A. Yes, or when they are called.

THE CHAIRMAN: Who goes over? The truck or the engine?

BY MR. SINCLAIR:

- Q. Who goes over?
- A. The engineman would advise the shop, the shop would advise the maintainer who would take the truck and go to St. Boniface to effect the repair if he could.
- Q. Immediately?

A. Yes.

THE CHAIRMAN: Then it is the yard engine that goes to St. Boniface two or three times a week?

THE WITNESS: No, we have three yard engines assigned at St. Boniface.

BY THE CHAIRMAN:

Q. Who was it that goes two or three times a week to St. Boniface?

A. The maintainer.

BY MR. SINCLAIR:

Q. As a matter of routine?

A. Yes, as a regular routine. He is what you might call a --

BY THE CHAIRMAN:

Q. It is all right, I understand it now. He goes as a matter of routine two or three times a week but when there is a special call he makes a special trip?

A. Correct. I think we should make it clear, Mr. Sinclair, that we have some 1,000 *l.p.* switchers in the Kootenay and Kettle valley assigned to work train service and which are used as wayfreights.

BY MR. SINCLAIR:

Q. And if anything happens to them, what is done?

A. The normal procedure is followed. The shop would be notified and we would have to send a man out. I have no doubt that there the

engineman would ~~not~~ be capable of resetting the ground relay if it tripped.

BY HON. MR. McLAURIN:

Q. But the train would be stopped?

A. Yes. I say that because that is a single unit operation and the majority of it is heavy grade territory. Even if he were descending the grade he certainly could not afford to deplete his air.

Q. The train would stop and he would telephone and get in touch with the dispatcher and receive assistance?

A. That is correct.

BY MR. SINCLAIR:

Q. Based on your experience on diesels in freight service of various types and various numbers of units, what approximately would be the locomotive mileage per alarm, Mr.

Woodland, in your experience, on these diesel units? You said that you did not keep records, I think, of these things but we have had some witnesses who did. I am asking you what your estimate would be. I recognize that it is difficult to guess but I would like your best estimate.

A. That is freight service?

A. Freight service, yes.

HON. MR. McLAURIN: Perhaps your needs are met. You have seen or heard Mr. Youngs' evidence. Does that help you?

MR. SINCLAIR: Mr. Youngs' evidence shows -- Exhibit / ¹²⁷ -- the average was 6,933 miles -- or roughly 7,000 miles -- in 1954, 4,850 miles in 1955 and 5,357 in 1956. That is all types of power. Mr. Woodland, that also includes passenger.

THE CHAIRMAN: Has the witness thought about the matter at all?

MR. SINCLAIR: Well, it was my understanding that he had, sir.

THE WITNESS: I would say it would be somewhat considerably higher than that.

BY HON. MR. McLAURIN:

Q. Higher than Mr. Youngs' figures?

A. Yes, but I could not risk an estimate because it has been two years since I have done any frequent riding. I have been away from it for two years and speaking of conditions today I would not like to give a guess.

BY THE CHAIRMAN:

Q. You do not want to guess?

A. That is right.

MR. SINCLAIR: The point I wanted to make was that Exhibit No. 127 put in by Mr. Youngs included passenger mileage and in his view on freight it would be higher than that.

MR. LEWIS: The average would be higher?

MR. SINCLAIR: Yes, the average locomotive miles per alarm in freight would be higher.

BY MR. SINCLAIR:

Q. Mr. Woodland, what would the situation with respect to defects causing train delays in your experience on diesels versus steam power, or what has been the experience in the operation of motive power?

A. I think the significant difference is that it is very seldom that you have to send assistance to a ^{diesel} locomotive in my territory.

BY THE CHAIRMAN:

Q. A diesel locomotive?

A. Yes. We also operate steam locomotives and normally if you are asked for assistance by a steam locomotive you immediately search for another locomotive to go out and handle the train.

BY MR. SINCLAIR:

Q. In relation to defects, what has been your experience in maintaining both kinds of power? Which causes the most amount of trouble with respect to defects, steam or diesel?

A. Well, I do know that the maintenance of steam locomotives is considerably higher than for diesel.

Q. Yes, but I am asking you about defects causing train delays. Let us relate it to the Portage division where you have direct supervision, let us say. What has been your experience?

A. That is a hard figure to give because the figure has swung so much. We have gradually

increased our use of diesels and gradually decreased our use of steam and at no time have we been in a fifty-fifty ratio with regard to diesel and steam. I would say this, however, that the incidence of diesel locomotive failure is no greater than it was with steam.

Q. Well now, what has been the experience that you have had as these diesels became older?

A. My experience has been that when you first purchase an order of diesel electric locomotives you do have a number of troubles which may be caused through a so-called improvement in design which did not quite work out and I cannot recall one order of locomotives that did not require a considerable amount of modification and adjustment before it was what you might call "shaken down" or "settled down" to a normal routine life.

I have recently checked the failure record of ten of our oldest units which now have over 700,000 miles -- accumulated miles -- and I found --

Q. Is that each?

A. Each.

Q. Yes?

A. And I found that their incidence of failure has not increased.

This is also borne out by my own experience and our method of maintenance is formulated to prevent exactly that.

Q Well, what has been your experience with regard to the requirements of maintenance as the units become older is my question?

A The requirements of maintenance do not increase as the units become older.

Q Why, Mr. Woodland?

A Because we do not effect repairs on the locomotives. We recondition parts, make them as new and replace them completely when they are removed at certain specified periods.

BY HON. MR. McLAURIN:

Q Something like with a DC-3 aeroplane?

A The maintenance program is very similar. All parts removed are completely tested. Wearing parts, we arbitrarily establish a safe life for them and discard them regardless of condition.

Q Hours of use?

A Hours of use. For instance, piston rings, we will remove piston rings at a pre-determined interval. They are in beautiful condition but they are thrown out and replaced arbitrarily.

BY MR. SINCLAIR:

Q Now, in your program of maintenance for steam, how did that work, Mr. Woodland,

and compare with that your program of maintenance on diesels, would you please, for the commission?

A Well, a steam locomotive was generally assigned to a roundhouse at a subdivisional terminal. From the time it left the shop that roundhouse was responsible for its condition. All the parts that were required they manufactured themselves.

Q Who is they ?

A The roundhouse staff. They would manufacture the parts which went to replace those worn out on the locomotive. The locomotive would be kept in service for operation from 60,000 to 80,000 to 100,000 miles and would be returned to the main shop when it would be completely dismantled and rebuilt. In the maintenance of the steam locomotive company manufacture of equipment was the common thing. We do not purchase parts from outside suppliers. Consequently, you were more or less at the mercy of the individual, both the man who supplied the new equipment and the man who manufactured it. Now, the wearing parts are not machined to such fine tolerances and it was not quite so critical. With a diesel locomotive that is entirely changed. Do you want me to ..

Q I want first how far apart did you have

your maintenance forces for steam locomotives?

A Every 125, 130 miles.

Q And how far apart do you have your forces for (a) checking diesels well, answer that first, how far apart are the people that you use for checking your diesel locomotives, the maintenance people that do your checking?

A Well, a diesel locomotive is assigned to a base maintenance point of which there are four.

Q All right, you didn't listen, but go ahead. Now, you are on to something else.

A I would prefer to answer your question. If I misunderstood it I am sorry.

Q Maybe it is my fault. I think it is but we will take a run, say out of Winnipeg going west where would the first time be that the diesel unit would be looked at by the maintenance force on a freight train going west?

A At Moose Jaw where the unit would be fueled.

Q Would the unit stop at Brandon, for instance?

A Only to get through the terminal. It might go through the yard in passing through the terminal. The crew would change off at one or another change-off

point. The locomotive would receive no inspection whatsoever and it would go through Broadview in the same fashion and conceivably it could go through Moose Jaw. There is no inspection required to be done at any of those points and it would be the same through Swift Current, Medicine Hat until ^{it} ~~he~~ arrived at Calgary which is its base maintenance point where it would receive an inspection.

Q Now, as it came to Brandon and stopped would there be shop staffs available?

A There would be shop staffs available, yes, twenty-four hours a day.

Q Would they or would they not get on the unit?

A They would not. They do not as I happen to know in that particular instance. They do not go near the unit on through freight service.

Q If the engineman wanted them are they available?

A They are available if the engineman wanted them. If there had been a message sent on the locomotive the foreman would arrange for the men to be at the change-off point to see if they could do anything with kthe unit but our maintenance requirements do not require an inspection at the point.

Q Now, you say they would go through to this base point, do you call it?

A Its base, yes, which would be Calgary.

BY HON. MR. McLAURIN:

Q From Winnipeg to Moose Jaw without refueling?

A Yes, our refueling stations are established quite roughly on a 450-mile basis.

THE CHAIRMAN: I thought you started out this inquiry, Mr. Sinclair, by asking for the diesel and comments on steam engines?

MR. SINCLAIR: I think I have got it now right through to the base point, 125 miles for steam and the base point which is Winnipeg.

THE WITNESS: I didn't quite follow you. The usual practice with steam freight engines was to take the engine off and return it to the roundhouse at each subdivisional terminal which we can say is roughly 125 to 130 miles apart. A Winnipeg engine in freight service would very seldom go beyond Brandon. If it went beyond Brandon it is because somebody stole it on us. They might take the engine and use it for their purposes on the Saskatchewan district but we would be right after them wanting it back on its own territory.

BY THE CHAIRMAN:

Q You are thinking of steam?

A Steam, yes.

BY MR. SINCLAIR:

Q That is how many miles?

A It is 133 miles between Winnipeg and Brandon.

Q Before it would go to the roundhouse?

A Yes.

Q And what would they do at the roundhouse with the steam locomotive? Would they inspect it and check it?

A It would be checked and inspected.

Q Now, a diesel out of Winnipeg, where would be the first time it was checked or inspected?

A Calgary.

Q How many miles is that?

A Oh, 850, 900.

THE CHAIRMAN: How far?

HON. MR. McLAURIN: 860.

BY THE CHAIRMAN:

Q I thought you said 150?

A No, 850 or 900, in around there.

BY MR. SINCLAIR:

Q The basic reason for the very marked effect between one at 125 miles and the other approximately 850 miles, what is the reason for that?

A Because the diesel locomotive does not need maintenance attention at intervals less than -- conceivably, a diesel locomotive can leave Calgary and operate 5,000 miles without maintenance inspection.

Q Have you set up a program of maintenance inspection at mileage intervals on the Canadian Pacific?

A There is a program of what is known as periodic preventative maintenance established on a system basis which governs the maintenance of all types of diesel electric locomotives. The maintenance regulations for each manufacturer's locomotive is separate and distinct from the other manufacturers' locomotive.

Q Now, what are these periodic points? What are the mileages between them?

A When the locomotives were first purchased the interval between inspections at the base point was 3,000 miles. That was later increased to 5,000 miles and at present it is 6,000 miles.

Q In other words, after each 6,000 miles of operation the locomotive must be at its base point for an inspection?

A Yes. A leeway of 500 miles is allowed.

Q A leeway of 500 either over or under the 6,000 is allowed?

A Yes.

Q And you say you have four of these base points?

A Yes.

Q They are?

A Calgary and Nelson in the west and at

Chapleau and Montreal in the east.

Q And after you have this inspection at around 6,000 does it then go in multiples or what?

A Inspections are then based on multiples of 6,000.

BY THE CHAIRMAN:

Q May I just ask: You were talking a little earlier about a diesel locomotive leaving Winnipeg which would not be inspected until it got to Calgary. That is only 850 miles. If it had not gone 6,000 it would not be inspected there?

A The longest run we could have is Montreal to Vancouver and we do run our trans-continental passenger trains over that distance. We have in addition to our 5,000-mile inspections what is known as a turn-around inspection and a trip inspection; in other words, a trip inspection is undertaken each time a locomotive comes back to its maintenance point. The turn-around inspection is undertaken at the point where the locomotive turns to go back to its maintenance point. It could be Coquitlam in the west, Winnipeg in the east -- east of Calgary. The turn-around inspection is nothing more than a visual examination.

BY MR. SINCLAIR:

Q By whom?

A By a machinist or mechanic and conceivably by an electrician and they test the bell, the horn, the lights, the windshield wipers, walk around the unit to see that there are no obvious defects, walk through the engine-rooms, look at the pressure gauges, and listen for any unusual noises and sounds.

BY HON. McLAURIN:

Q Just a service check?

A Yes, and while it is being done the unit is being serviced and that can be done in a matter of fifteen minutes. We very often turn units out of Winnipeg in fifteen minutes for servicing.

BY MR. SINCLAIR:

Q Including these trip checks you are now describing?

A That is turn-around inspection, yes.

BY THE CHAIRMAN:

Q What is the difference between a turn-around inspection and a trip inspection?

A There is very little difference in the requirements except on the trip inspection they will check for lubricating oil and oil in the compressor crank case and take in just one or two more items. Basically it is almost identical. Practically it works out to be almost the same thing.

BY MR. SINCLAIR:

Q I couldn't hear, Mr. Woodland.

A I say basically it is almost identical and practically it works out to just about the same thing.

Q Now, these six thousand mile or multiples of six thousand mile checks that you have been speaking of, what is involved in them? How do they compare with the trip or turn-around inspection?

A The factor that limits the maximum mileage at which a unit can operate from its base without maintenance attention is lubrication of the running gear. That is, the roller bearings on the axle journals, the traction motor suspension bearings, the gear case which contains the gears between the motor and the axle and in fact the 6,000 mile inspection, as it is today, is a glorified lubrication which could be compared to an oil change and a grease job in an automobile. The mechanics too would add cooling water if it is required. They will check the lubricating oil level, they will note that all gauges are performing and that pressures are normal. It may be necessary to renew the car body filters. They are a wire mesh filter in the car body which are oil soaked to extract dust from the air that is in-drawn to the engine and they may even, if the lubricating analysis show it, change the lubricating oil filter

or fuel oil filters.

Q How do they get this lubricating oil analysis? Do they do it on each unit or is that a pre-determined formula?

A Each time a locomotive returns to its maintenance base an oil sample is taken. This oil sample is analyzed in the laboratory which is provided at each of these maintenance points. They check also ^{for} ~~the~~ dilution and the flash-point of the oils, acid contamination or evidence of metallic content. If any of these things are evidenced action is immediately taken to determine the cause and to effect some sort of remedy and at 5,000 miles this is done as well, and then again as a further check once each month a sample of the lubricating oil that is taken from each unit is forwarded to St. Luc for spectographic analysis. That analysis is primarily to determine the metallic content of the oil and if you were to find an unusual amount of lead or bronze you would immediately suspect that your main bearings might be wearing unduly. If you were to find an unusual amount of iron you would check your piston rings and liner condition. That is just another method of control to forecast ^{to us,} ~~things,~~ what the engine condition actually is.

Q Now, as they have made this multiple, 5000 one way or the other, miles off 6,000 as

you have explained it, how many miles do the units run before they get what I might call a major overhaul?

A Well, maybe I should just explain that 5,000 mile inspection.

Q Five, now it is ...

A It has been increased to six since I was active out there. The 6,000-mile inspection has so many requirements with every inspection that is done ^{being} ~~is~~ noted as having been done by the foreman. The 12,000-mile inspection includes a few more requirements, no scheduled replacement of parts or anything is indicated in these requirements. At 30,000 miles certain steps are taken. At 60,000 a few more items come in for observation. This includes, of course, the electrical as well as the mechanical equipment. At 120,000 miles a little more is included and at 240,000 miles when I was engaged in the maintenance of locomotives on a regional basis the locomotive would be forwarded to the main shop.

Q Where at?

A There are two of these on the system, one at Ogden, that is Calgary, and one at Angus, that is Montreal. There, the chief work to be done is you recondition your cylinder assemblies on the engine. This requires dismantling of the engine,

the pistons and liners and connecting rods would be removed, the head would be re-conditioned, valves ground, the same as with an automobile, all parts removed would be thoroughly tested in one of two or three ways. The wearing parts, gaskets, rings, etc., would be renewed. All this would be established on ^{the} ~~a~~ basis of experience both on our own and other railroads and the locomotive manufacturer and at the completion of that 240,000 ^{mile inspection} ~~miles~~ a locomotive would return to its running maintenance base and it was expected that it would then operate for a further 240,000 miles without additional attention of the same kind being given.

Q Has that 240,000 miles basic major overhaul been altered in any way, Mr. Woodland.

A The basic maintenance overhaul on General Motors engines has been increased from 240 to 360 thousand miles and this was not only done on new locomotives operating from zero mileage to 360,000 but we took units that already had 240,000 miles, we operated them to 600,000 and we found we were still being very conservative in our estimates of the service life we could get.

BY THE CHAIRMAN:

Q How often does the lubricating oil have to

be changed?

A By lubricating oil analysis control we never change the lubricating oil. We started out following the manufacturers' recommendations changing the oil every 30,000 miles. We found that the normal engine burns 100 gallons of lubricating oil a month. The crank case holds roughly something in the neighbourhood of 200 gallons. We felt that as the oil did not stay in the crank case, we were using 100 gallons per month and we experimented with extended life, maintaining the control through analysis and found that it had no detrimental effect on our operation and it certainly effected a substantial saving and that is the policy we now follow.

BY MR. SINCLAIR:

Q What is the policy?

A The oil will run right from one main shopping to another.

Q And so rather than go into the service station and have your Essomatic card checked and punched you wait until there is a major overhaul before you drain your crank case?

A Yes, I might say the crank case is drained at the major overhaul.

BY MR. LEWIS:

Q 350,000?

A Now.

BY MR. SINCLAIR:

Q And how often do you add crank case oil?

A As I said before, the crank case holds 200 gallons. We use what are known as heavy duty oils. They have chemical additives in them which prevents heavy sludging and provide chemical reaction to provide a high pressure lubricant in case the film does break down under unusual stress.:

Q You got lost in the technical explanation of what was involved in the materials and my question was how often did you change oil?

A Well, we like to keep this additive level up; in other words, we do not like to make small additions, we do not like to add, say, 10 gallons to 190. We would rather add 45 to 155 and in that way keep the percentage of the additives high and also at our base maintenance points --

Q How often do you add lubricating oil, Mr. Woodland?

A Once every 5,000 miles.

MR. SINCLAIR: I think that demonstrates how difficult it is to get a mechanical man to put into lay language some of these things. Maybe we might adjourn now?

BY THE CHAIRMAN:

Q What is the main quantity you like to add?

A About 45 gallons.

THE CHAIRMAN: Tomorrow morning
ten o'clock.

--At 4 p.m. the Commission adjourned
until 10 a.m. Tuesday, April 8, 1957.
